

# **Preliminary Report**

# SUBDIVISION REGULATIONS

A Part of the Master Plan For MONROE COUNTY, INDIANA

**Prepared For** 

Monroe County Plan Commission

Ву

# SUBDIVISION REGULATIONS

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#### INTRODUCTION

The SUBDIVISION REGULATIONS constitute one of the implementing measures of planning (See definition of "Master Plan", \$ 3 Chpt. 174 Acts of '47). Reference is made to the content of these regulations in \$ 35 of Chapter 174, and the specific content is covered in \$ 45-52 of the same chapter.

When properly applied, the subdivision regulations have a threefold effect and benefit.

- (a) All subdividers and developers are required to follow the same standards of design and improvements thereby eliminating discriminatory action on approvals.
- (b) The occupants of the approved subdivision are assured that water, sewer and street improvements are installed properly and will meet their needs; that the design and layout of the subdivision also provides for their needs. (Coupled with zoning requirements the subdivision regulations guide the development of maximum "livability").
- (c) The public is assured that the regulations will promote the construction of an attractive, safe and sanitary environment, with the long-range result that the county affords an attraction for growth, a functional street system, maintenance of property values and an uplift in community pride. Further, the proper installation of improvements promotes the objectives of the planning legislation--the efficient use of public funds--in that maintenance and repair costs for those improvements which are dedicated to the public are held to a minimum.

While the standards and requirements included herein result from investigations and discussions with persons trained and experienced in the particular fields covered by the regulations and from the planning consultant's training and experience, they are considered to permit a degree of flexibility in some instances. This is one of the principal reasons for preliminary review and public hearing by the Plan Commission prior to the transmittal of the regulations to the Board of County Commissioners for its review and adoption.

The procedure for placing the subdivision regulations into effect must follow the requirements of \$ 37-42 and \$ 45.

#### SUBDIVISION REGULATIONS

# A Part of the Master Plan For MONROE COUNTY, INDIANA

(Note: The form and content of these regulations are subject to the approval of the County Attorney prior to their adoption)

Preamble and Ordaining clause to be inserted here

#### ARTICLE 1. ESTABLISHMENT OF CONTROL

No plat or replat of a subdivision of land located within the jurisdiction of the Commission shall be recorded until it shall have been approved by the Commission, and such approval shall have been entered in writing on the plat by the President and Secretary of the Commission.

#### ARTICLE 2. DEFINITIONS.

For the purpose of these regulations certain terms or words used herein shall be interpreted or defined as follows. Words used in the present tense include the future tense. The term "shall" is mandatory.

ALLEY: A permanent public right-of-way designed to provide a secondary means of access to abutting property.

BLOCK: Property abutting on one side of a street, and lying between the two nearest intersecting or intercepting streets, or between the nearest intersecting or intercepting street and railroad right-of-way, waterway, or other definite barrier.

BOARD OF COMMISSIONERS: The Board of Commissioners of the County of Monroe, Indiana.

BUILDING SETBACK LINE: The line nearest the front of and across a lot establishing the minimum open space to be provided between the front line of buildings and structures and the front lot line or street right-of-way line.

COMMISSION: The Monroe County Plan Commission.

COUNTY: County of Monroe, Indiana.

CUL-DE-SAC (Court or Dead End Street): A short street having one end open to traffic and being permanently terminated by a vehicle turn-around.

DEVELOPER: Any person engaged in developing or improving a lot or group of lots or structures thereon for use or occupancy.

EASEMENT: A grant by the property owner of the use of a strip of land by the public or a person for specified purposes.

JURISDICTION OF THE COMMISSION: The unincorporated territory within the County of Monroe, Indiana.

LOT: A portion of a subdivision, or other parcel of land intended as a unit for transfer of ownership or development.

MASTER PLAN: The complete plan, or any of its parts, for the development of the County prepared by the Commission and adopted in accordance with Chapter 174, Acts of 1947, General Assembly of Indiana, as is now or may hereafter be in effect.

PERSON: A corporation, firm, partnership, association, organization or any other group acting as a unit, as well as a natural person.

PLAT: A map or chart indicating the subdivision or resubdivision of land, intended to be filed for record.

PRIVATE DRIVE: A right-of-way which has the characteristics of a street, as defined herein, except that it is not dedicated to the public use. A driveway which is located on a lot and which serves only the use on that lot is not considered as a private drive.

PUBLIC FACILITIES PLAN: The part of the Master Plan, now or hereafter adopted, which shows the locations of existing and proposed school and park or recreation area sites.

STREET: A right-of-way, other than an alley, dedicated or otherwise legally established to the public use, usually affording the principal means of access to abutting property. A street may be designated as a highway, thoroughfare, parkway, boulevard, road, avenue, lane, drive, or other appropriate name.

STREET (OR ALLEY) IMPROVEMENT: Shall mean the construction of a street or alley to its full thickness, commencing at the subgrade according to the specifications contained in Article 4, Section 2, hereinafter. The placing of a new surface over an existing paved or closed surface street or alley shall not be considered as an improvement but as maintenance.

STREET, MAJOR: A street designated for large volumes of traffic movement. Certain Major Streets may be classed as Limited Access Highways to which entrances and exits are provided only at controlled intersections and access is denied to abutting properties.

STREET, FEEDER: A street planned to facilitate the collection of traffic from Local Streets, and to provide circulation within neighborhood areas and convenient ways for traffic to reach Major Streets.

STREET, LOCAL: A street designated primarily to provide access to abutting properties, usually residential. Certain Local Streets may be Marginal Access Streets parallel to Major Streets, which provide access to abutting property and ways for traffic to reach access points on Major Streets.

SUBDIVIDER: Any person engaged in developing or improving a tract of land which complies with the definition of a subdivision as defined in this ordinance.

SUBDIVISION: The division of any parcel of land shown as a unit, as part of a unit, or as contiguous units on the last preceding transfer of ownership thereof, into two or more parcels, sites, or lots, any one of which is less than five acres in area, for the purpose, whether immediate or future, of transfer of ownership, provided, however, that the division or partition of land into parcels of more than five acres not involving any new streets or easements of access, and the sale or exchange of parcels between adjoining lot owners, where such sale or exchange does not create additional building sites, shall not be considered a subdivision; or

The improvement of one or more parcels of land for residential, commercial or industrial structures or groups of structures involving the subdivision and allocation of land as streets or other open spaces for common use by owners, occupants or lease holders or as easements for the extension and maintenance of public sewer, water, storm drainage, or other public utilities and facilities.

THOROUGHFARE PLAN: The part of the Master Plan, now or hereafter adopted which includes a major street and highway plan and sets forth the location, alignment, dimensions, identification, and classification of existing and proposed streets, highways, and other thoroughfares.

ZONING ORDINANCE: The part of the Master Plan for the County, now or hereafter adopted, including an ordinance and zone map and which divides the jurisdiction of the Commission into zones, with regulations and requirements and procedures for the establishment of land use controls.

# ARTICLE 3. PROCEDURE.

A subdivider desiring approval of a plat of a subdivision of any land lying within the jurisdiction of the Commission, shall submit a written application therefore to the Commission. Such application shall be accompanied by the information, requirements and plans set forth in Figure 1., all in accordance with the requirements set forth in these regulations.

The requirements and principles and standards of design contained herein have general application to all subdivisions within the Commission's jurisdiction; however, due to the potential for development of the steep hillsides in the county additional requirements and principles and standards are provided. Therefore, in many instances two sets of standards are set forth which apply to (a) subdivisions within which differences in ground elevations result in an average slope of ten per cent (10%), or less, referred to herein as "flatland subdivisions", and (b) subdivisions within which differences in ground elevation result in an average slope in excess of ten per cent (10%) referred to herein as "hillside subdivisions".

# Step 1. Preliminary Plat for Subdivision

- A. The owner or subdivider shall provide a preliminary plan of the subdivision which shall show the manner in which the proposed subdivision is coordinated with the Master Plan and its provisions; specifically with relation to the requirements of the Official Thoroughfare Plan; school and recreational sites; shopping centers; community facilities; sanitation, water supply and drainage, and other developments, existing and proposed, in the vicinity; provided, however, that no land shall be subdivided for residential use unless adequate access to the land over improved streets or thoroughfares exists or will be provided by the subdivider, or if such land is considered by the Commission to be unsuitable for such use by reason of flooding or improper drainage, objectionable earth and rock formation, topography, or any other feature harmful to the health and safety of possible residents and the community as a whole.
- B. The subdivider shall provide the following:
  - 1. <u>Location Map</u> (which may be prepared by indicating the data by notations on available maps) showing:
    - a. Subdivision name and location.
    - b. Any thoroughfares related to the subdivision.
    - c. Existing elementary and high schools, parks and playgrounds serving the area proposed to be subdivided, and other community facilities.
    - d. Title, scale, north point and date.
  - 2. A Preliminary Plat showing:
    - a. Proposed name of the subdivision
    - b. Names and addresses of the owner, subdivider and the city planner, land planning consultant, engineer or surveyor, who prepared the plan.
    - c. Streets and rights-of-way, on and adjoining the site of the proposed subdivision, showing the names (which shall not duplicate names of other streets in the community, except as designated by the Commission) and including roadway widths, approximate gradients, types and widths of pavement, curbs, sidewalks, cross-walks, tree-planting and other pertinent data.

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- d. Easements: Locations, widths and purposes.
- e. Statement concerning the location and approximate size or capacity of utilities to be installed.
- f. When the subdivision is to be served by private sewage disposal systems on individual lots, percolation tests as described in Bulletin No. S. E. 8, CURRENT ISSUE, Indiana State Board of Health shall be made as directed by the Commission and the results, certified by a registered Professional Engineer, shall accompany the preliminary plat.
- g. Layout of lots, showing dimensions and numbers.
- h. Parcels of land proposed to be dedicated or reserved for schools, parks, playgrounds or other public, semi-public or community purposes.
- i. Contours at vertical intervals of two (2) feet if the general slope of the site is less than ten per cent (10%) and at vertical intervals of five (5) feet if the general slope is greater than ten per cent (10%).
- j. Ground water levels stated in inches below ground surface and given at points of lowest ground surface elevation.
- k. Tract boundary lines showing dimensions, bearings, angles, and references to section, township and range lines or corners.
- I, Building setback or front yard lines.
- m. Legend and notes.
- n. Other features or conditions which would affect the subdivision favorably or adversely.
- or Scale\*, north point and date.
- 3. A description of the protective covenants or private restrictions to be incorporated in the plat of the subdivision.

* The	e Preliminary Plat of the subdivision shall be drawn to a scale of fifty (50) feet
to	one (1) inch, or one hundred (100) feet to one (1) inch; provided, however,
the	it if the resulting drawing would be over thirty-six (36) inches in shortest dimen
sio	n, a scale as recommended by the Commission may be used.

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C. The application shall be accompanied by a certified check or money order in the amount of ten dollars (\$10.00) plus twenty-five cents (25¢) for each lot in the proposed subdivision with a minimum total charge of fifteen dollars (\$15.00) to cover the cost of checking and verifying the proposed plat, and such amount shall be deposited in the General Fund.

# Step 2. Preliminary Plat Approval

- A. After an application for approval of a plat of a subdivision, together with two (2) copies of all maps and data, has been filed, the Commission shall review the Preliminary Plat and accept the application and plat or return them to the subdivider with suggestions for changes. No application will be considered at a meeting unless it has been filed with the Commission at least ten (10) days before the date of such meeting.
- B. After the Commission has accepted the application, it shall set a date for a hearing on the Preliminary Plat, notify the applicant in writing, and notify by general publication or otherwise, any person or governmental unit having a probable interest in the proposed plat. The cost of publication of the Notice of Hearing shall be met by the applicant.
- C. Following the hearing on the Preliminary Plat, the Commission will notify the applicant in writing that it has approved the Preliminary Plat and is ready to receive the Final Plat, or will advise the applicant of any further changes in the Preliminary Plat which are desired or should have consideration before approval will be given.

# Step 3. Final Plat

The Final Plat shall meet the following specifications:

- A. The Final Plat may include all or only a part of the Preliminary Plat which has received approval.
- B. The original drawing of the Final Plat of the subdivision shall be drawn to a scale of fifty (50) feet to one (1) inch, provided that if the resulting drawing would be over thirty-six (36) inches in shortest dimension, a scale of one hundred (100) feet to one (1) inch may be used. Three black or blue line prints shall be submitted with the original Final Plat, or, in order to conform to modern drafting and reproduction methods, three black line prints and a reproducible print shall be submitted.
- C. The following basic information shall be drawn:
  - 1. Accurate boundary lines, with dimensions and angles, which provide a survey of the tract, closing with an error of not more than one (1) foot in five thousand (5000) feet.

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- 2. Accurate distances and directions to the nearest established street corners or official monuments. Reference corners shall be accurately described on the plan.
- 3. Accurate locations of all existing and recorded streets intersecting the boundaries of the tract.
- 4. Accurate metes and bounds description of the boundary.
- 5. Source of title of the applicant to the land as shown by the last entry in the books of the County Recorder.
- 6. Street Names
- 7. Complete curve notes for all curves included in the plan.
- 8. Street lines with accurate dimensions in feet and hundredths of feet, with angles to street, alley and lot lines.
- 9. Lot numbers and dimensions.
- 10. Accurate locations of easements for utilities and any limitations on such easements.
- 11. Accurate dimensions for any property to be dedicated or reserved for public, semipublic or community use.
- 12. Building set back or front yard lines and dimensions.
- Locations, type, material and size of all monuments and lot markers.
- Plans and specifications for the improvements required in this Ordinance.
- 15. Restrictions of all types which will run with the land and become covenants in the deeds for lots.
- 16. Name of the subdivision.
- 17. Name and address of the owner and the subdivider.
- 18. North point, scale and date.
- 19. Certification by a registered professional engineer or registered land surveyor.
- 20. Certification of dedication of streets and other public property.
- 21. Certificates for approval by the Commission.

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# Step 4. Final Plat Approval

- A. When the Final Plat is submitted to the Commission, it shall be accompanied by a notice from the Board of Commissioners stating that there has been filed with and approved by that body, one of the following:
  - A certificate that all improvements and installations for the subdivision required for its approval have been made or installed in accordance with specifications; or
  - 2. A bond which shall:
    - a. Run to the Board of Commissioners
    - b. Be in an amount determined by the Commission to be sufficient to complete the improvements and installations in compliance with this Ordinance.
    - c. Be with surety satisfactory to the Commission, and
    - d. Specify the time for the completion of the improvements and installations.
- B. Upon the completion of the improvements and installations required of a subdivider for the approval of a Final Plat, and prior to the acceptance thereof for public maintenance by the Board of Commissioners or, if applicable, to any other governmental unit, the subdivider shall provide a three (3) year maintenance bond which shall:
  - Run to the Board of Commissioners and, if applicable, to any other governmental unit having a legal responsibility for the maintenance of said improvements and installations.
  - 2. Be in an amount equal to twenty per cent (20%) of the cost of said improvements and installations as estimated by the Board of Commissioners.
  - 3. Provide surety satisfactory to the Commission.
  - 4. Warrant the workmanship and all materials used in the construction, installation and completion of said improvements and installations to be of good quality and to have been constructed and completed in a workmanlike manner in accordance with the standards, specifications and requirements of this ordinance and the satisfactory plans and specifications therefor.
  - 5. Provide that for a period of three (3) years after said installations and improvements have been completed or are accepted for public maintenance by any appropriate governmental unit or agency thereof, the subdivider will at his own

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expense make all repairs to said Improvements and installations, or the foundations thereof, which may become necessary by reason of improper workmanship or materials, with such maintenance, however, not to include any damage to said improvements and installations resulting from forces or circumstances beyond the control of said subdivider or occasioned by the inadequacy of the standards, specifications, or requirements of this ordinance.

C. Within a reasonable time after application for approval of the Final Plat, the Commission shall approve or disapprove it. If the Commission approves, it shall afix the Commission's seal upon the plat, together with the certifying signature of its president and secretary. If it disapproves, it shall set forth the reasons for such disapproval in its own records and provide the applicant with a copy.

## ARTICLE 4. PRINCIPLES AND STANDARDS OF DESIGN.

The Final Plat of the subdivision shall conform to the following principles and standards of design.

- § 1. GENERAL. The subdivision shall conform to the principles and standards which are generally exhibited in the Master Plan.
- § 2A. STREETS. The following requirements are applicable to all subdivisions within the jurisdiction of the Commission except for variances and additional requirements for hillside subdivisions which are contained in Section 2B hereafter.
  - A. The street and alley layout shall provide access to all lots and parcels of land within the subdivision, and where streets cross other streets, jogs shall not be created.
  - B. Proposed streets shall be adjusted to the contour of the land so as to produce useable lots and streets of reasonable gradient.
  - C. Certain proposed streets, where appropriate, shall be extended to the boundary line of the tract to be subdivided so as to provide for normal circulation of traffic within the vicinity.
  - D. Wherever there exists a dedicated or platted portion of a street or alley adjacent to the proposed subdivision and which conforms to the Master Plan, the remainder of the street or alley to the prescribed width shall be platted within the proposed subdivision.
  - E. Widths of streets shall conform to the widths specified in the Thoroughfare Plan.
  - F. The minimum right-of-way of Local Streets, including Marginal Access Streets or Cul-de-Sacs, shall be fifty (50) feet. All Cul-de-Sacs shall terminate in a circular right-of-way, with a minimum diameter of one hundred (100) feet, or other arrangement for the turning of all vehicles conveniently within the right-of-way.
  - G. Alleys shall be discouraged in residential areas but should be included in commercial and industrial areas where needed for loading and unloading or access purposes, and where platted, shall be at least twenty (20) feet in width.
  - H. The center lines of streets should intersect as nearly at right angles as possible.
  - I. At intersections of streets and alleys, property line corners shall be rounded by arcs of at least fifteen (15) feet radii or by chords of such arcs.
  - J. At intersections of streets the property line corners shall be rounded by arcs with radii of not less than twenty (20) feet, or by chords of such arcs.

- K. If the smaller angle of intersection of two streets is less than sixty (60) degrees, the radius of the arc at the intersection of property lines shall be increased as deemed advisable by the Commission.
- Li Intersections of more than two (2) streets at one point shall be avoided,
- M. Where parkways or special types of streets are involved, the Commission may apply special standards to be followed in the design of such parkways or streets.
- N. Whenever the proposed subdivision contains or is adjacent to a railroad right-ofway or a highway designated as a "Limited Access Highway" by the appropriate highway authorities, provision shall be made for a Marginal Access Street, or a parallel street at a distance acceptable for the appropriate use of the land between the highway or railroad and such streets.
- O. Horizontal visibility on curved streets and vertical visibility on all streets must be maintained along the center lines as follows:
  - 1. Major Streets: Five hundred (500) feet.
  - 2. Feeder Streets and Parkways: Three hundred (300) feet.
  - 3. Local Streets: One hundred and fifty (150) feet.
- P. Curvature measured along the center line shall have a minimum radius as follows:
  - 1. Major Streets: Five hundred (500) feet.
  - 2. Feeder Streets and Parkways: Three hundred (300) feet.
  - 3. Local Streets: Two hundred (200) feet.
- Q. Between reversed curves on Major Streets there shall be a tangent of not less than one hundred (100) feet and on Feeder and Local Streets such tangent shall be not less than forty (40) feet.
- R. Maximum Grades for streets shall be as follows:
  - 1. Major Streets, not greater than six (6) per cent.
  - 2. Feeder and Local Streets and Alleys, not greater than ten (10) per cent.
- S. The Minimum Grade of any street gutter shall not be less than three-tenths (0.3) per cent.

#### S 2B. STREETS IN HILLSIDE SUBDIVISIONS.

A. <u>Variance</u>. The provisions of Section 2A, Article 4 which may be varied by the Commission in approving a hillside subdivision are listed below:

Subsections A, D, E, F, O, 2, P, O, 3, P, 2, P, 3, Q for Feeder and Local Streets, and R, 2.

B. Standards. The approval of street design and alignment at variance with the requirements of \$2A\$. in hillside subdivisions shall be based upon the planned density of development and topographical and geological features unique to each subdivision, to the end that the street system will best serve the needs of the occupants and the public; Provided that, (1) in no event shall the dedicated right-of-way of a street be less than forty feet (40'), (2) the maximum grade of streets may be increased to twenty per cent (20%) but only for straight distances of less than one hundred and fifty (150) feet, and (3) the design of streets shall give careful consideration to horizontal visibility and curvature and to vision clearance at street intersections which will provide maximum safety of access under the site conditions; in no case shall a radius of curvature, measured on the centerline of street, be less than eighty (80) feet.

#### § 3. BLOCKS

- A. Blocks should not exceed twelve hundred fifty (1250) feet in length.
- B. Blocks shall be of sufficient width to permit two tiers of lots of appropriate depth, except where an interior street parallels a Limited Access Highway or other Major Street or a Railroad Right-of-Way.
- C. Design standards for blocks may be varied by the commission for hillside subdivisions.

#### § 4A. LOTS IN FLATLAND SUBDIVISIONS.

- A. All lots shall abut on a street.
- B. Side lines of lots shall be at approximately right angles to straight streets and on radial lines on curved streets. Some variation from this rule is permissible, but pointed or very irregular lots should be avoided.
- C. Double frontage lots should not be platted, except that where desired along Major Streets, lots may face on an interior street and back on such thoroughfares. In that event a planting strip, or a planting screen, at least twenty (20) feet in width shall be provided along the back of the lot.
- D. Widths and areas of lots shall be not less than that provided in the Zoning Ordinance for single-family dwellings for the district in which the subdivision is located except that when a water main supply system or a sanitary sewer system are not

- available, the lot area necessary to install a private water supply or private sewage disposal system, or both, on the lot in accordance with the State Board of Health regulations shall become the required minimum lot area.
- E. Wherever possible, unit shopping centers, based upon sound development stand, ards, should be designed in contrast to the platting of lots for individual business use.
- F. Corner residential lots shall be wider than normal in order to permit appropriate setbacks from both streets.

# § 4B. LOTS IN HILLSIDE SUBDIVISIONS.

A. Lot sizes and shapes in a hillside subdivision shall be determined by the Commission on the basis of the degree of slope and the topographical and geological characteristics of the subdivision; Provided however that minimum average lot sizes for single-family dwellings shall be as follows:

		Minimum Average	
Degree of Slope		Lot Area (sq. feet)	Lot width (feet)
between	10% and 15%	12,000	95
<b>,91</b> .	16% and 20%	1 <i>5</i> ,000	100
'n	21% and 25%	20 <sub>x</sub> 000	115
**	26% and 30%	<b>30</b> , 000	140
over 30%	•	<b>43</b> , 560	150

- B. Where it can be clearly demonstrated by the subdivider that topographic conditions will prevent the utilization of all possible building sites in the subdivision if all lots are required to abut on a street, some variation from that requirement may be permitted by the Commission by means of the careful design and adequate construction of private drives, subject to the following requirements:
  - (1) Not more than three (3) lots shall be served by any one private drive.
  - (2) Private drives shall be constructed of the same material and with the same design characteristics as is required for streets under Article 5, Section 2; except that the minimum surfaced width of a private drive may be sixteen (16) feet.
  - (3) Common and joint maintenance by all owners, present and future, of the lots served by the private drive shall be made a part of the deed to each of the lots stipulating adequate maintenance and ensuring continuous access.
  - (4) When private drives are utilized, provision shall be made on the lots for the off-street parking of at least three (3) automobiles for each lot served by the private drive which shall be in addition to the zoning requirement of one off-street parking space per residence. Such additional off-street parking may be provided in a common and shared parking area on the premises.

(5) When the Commission approves the use of private drives in the subdivision, such approval shall be entered in writing in the Commission's minutes together with a copy of the deed restriction which is required by Subsection B (3) above.

#### § 5. EASEMENTS

Where alleys are not provided, casements for utilities shall be provided. Such easements shall have minimum widths of twelve (12) feet, and where located along lot lines, one-half the width shall be taken from each lot. Before determining the location of easements the plan shall be discussed with the local public utility companies to assure the proper placing of easements for the installation of services.

# § 6. BUILDING SETBACK LINES

- A, For Flatland Subdivisions shall be as provided in the Zoning Ordinance.
- B. For Hillside Subdivisions May be varied by the Commission when application of zoning requirements can be demonstrated to be an unnecessary hardship. The subdivider must show building locations on the plat. In no event shall a building line be closer to the street line than five (5) feet.

# § 7. PUBLIC USE AREAS

- A. Where sites for parks, schools, playgrounds or other public uses are located within the subdivision area as shown in the Master Plan, the Commission may request their dedication for such purposes, or their reservation for a period of two years following the date of the approval of the Final Plat. In the event a governmental agency concerned passes a resolution expressing its intent to acquire the land so reserved, the reservation period shall be extended for an additional year.
- B. Whenever the subdivision contains an area, or areas, which cannot be developed into useable building sites, and when such area, or areas, are not suitable for inclusion in a lot in the subdivision, they shall be offered for dedication as public use areas. When such area or areas are accepted by the County, provision shall be made, and included in the plat and deed of dedication, for permanent easement of access to such areas.

# ARTICLE 5. STANDARDS OF IMPROVEMENTS

The Final Plat of the subdivision shall conform to the following standards of improvements,

#### § 1. MONUMENTS AND MARKERS

A. Monuments and markers shall be placed so that the center of the bar or marked point shall coincide exactly with the intersection of lines to be marked, and shall be set so that the top of the monument or marker is level with the finished grade.

## B. Monuments shall be set:

- 1. At the intersection of all lines forming angles in the boundary of the subdivision.
- 2. At the intersection of street property lines.

## C. Markers shall be set:

- 1. At the beginning and ending of all curves along street property lines.
- 2. At all points where lot lines intersect curves, either front or rear.
- 3. At all angles in property lines of lots.
- 4. At all other lot corners not established by a monument.
- D. Monuments shall be of stone, pre-cast concrete, or concrete poured in place with minimum dimensions of four (4) inches by four (4) inches by thirty (30) inches. They shall be marked on top with an iron or copper dowel set flush with the top of the monument or deeply scored on top with a cross. Markers shall consist of iron pipes or steel bars at least thirty (30) inches long, and not less than five-eighths (5/8) inch in diameter.

# § 2. STREETS

- A. All streets (and alleys where provided) shall be completed to grades shown on plans, profiles, and cross-sections, provided by the subdivider and prepared by a registered professional engineer and approved by the Commission.
- B. The streets shall be graded, surfaced and improved to the dimensions required by the cross-sections and the work shall be performed in the manner prescribed in "Standard Specifications for Road and Bridge Construction and Maintenance 1957" of the State Highway Commission of Indiana. References in the following paragraphs refer to the S. H. C. of I. Standard Specifications.

Local streets shall be surfaced to a minimum width of twenty-eight (28) feet in flatland subdivisions. Alleys shall be paved to their full width. Street surface width in hillside subdivisions shall be determined on the basis of average lot density and topographical considerations. The general guide for hillside pavement widths is as follows:

Average Lot Size (Square Feet)	Indicated Pavement Width (Feet)	
12,000 - 15,000	26	
16,000 - 30,000	<b>24</b>	
31,000 - over	22	

- C. When streets in hillside subdivisions are to be paved to a width less than twenty-four feet, off-street parking bays shall be provided integral to the street and on the uphill side thereof at locations throughout the subdivision readily accessible to the lots therein, so as to permit the elimination of all on-street parking. Such bays shall contain in total within the subdivision three spaces per residential lot, such number not to include the one space per residence required by the Zoning Ordinance; Provided that when additional parking spaces will be provided on the lots in the subdivision the required number of parking bay spaces may be reduced by the amount of additional on-lot spaces.
- D. The street or alley surface shall be of portland cement concrete or a flexible pavement and shall be constructed in accordance with design characteristics at least equal to those given below.
- E. Prior to placing the street and alley surfaces, adequate subsurface drainage for the street shall be provided by the subdivider. Subsurface drainage pipe, when required, shall be coated corrugated pipe, or a similar type, not less than twelve (12) inches in diameter approved by the Commission. Upon the completion of the street and alley improvements, plans and profiles as built shall be filed with the Commission.

#### DESIGN CHARACTERISTICS OF STREET & ALLEY PAVEMENTS

Kind of Pavement & Thickness	Arterial	Feeder	Local	Alley
PORTLAND CEMENT CONCRETE				٠
Balanced Design Thickness*	10"-7"-10"	8"-5½"-8"	7½"-5"-7½"	•
Uniform Design Thickness	8¼"	6½"	6"	6"
*Intersections to be of uniform de FLEXIBLE**	sign using edge th	ickness.		·
	·	9 27 12	_	
Asphaltic Concrete	2"	11/2".	<u>-</u> -	· ·
	2" 2"	2"	2"	2"
Asphaltic Concrete Bituminous Coated Aggregate Water Bound Macadam	- 1	* *	2" 6"	2" 6" 8"

<sup>\*\*</sup>For intersections and parking strips on Local Streets, use Feeder Street design characteristics.

#### § 3A. SEWAGE DISPOSAL.

The following requirements are applicable to all subdivisions within the jurisdiction of the Commission, except for variances and additional requirements for hillside subdivisions which are contained in Section 3B hereafter.

- A. The subdivider shall provide the subdivision with a complete sanitary sewer system which shall connect with an existing approved sanitary sewer outlet, except that when such approved outlet is not available, one of the following methods of sewage disposal shall be used:
  - 1. A complete sanitary sewer system to convey the sewage to a treatment plant, to be provided by the subdivider in accordance with minimum requirements of the Indiana State Board of Health and/or the Indiana Stream Pollution Control Board.
  - 2. A private sewage disposal system on individual lots consisting of a septic tank and tile absorption field or other approved sewage disposal system, when laid out in accordance with minimum standards of the Indiana State Board of Health (refer to Bulletin No. S. E. 8, Septic Tank Sewage Disposal Systems, current issue); provided, however, that a private sewage disposal system on an individual lot shall consist of a septic tank with a minimum capacity of one thousand (1000) gallons and a tile absorption field which shall provide a minimum of two-hundred and fifty (250) square feet for each bedroom in the dwelling placed on the lot. This method of sewage disposal shall not be allowed if the water table is less than thirty (30) inches below the ground surface.
- B. The plans for the installation of a sanitary sewer system shall be provided by the subdivider and approved by the Indiana State Board of Health (Refer to Regulation HSE 14, I. S. B. H.). Upon the completion of the sanitary sewer installation, the plans for such system as built shall be filed with the Commission.
- C. In these Sections 3A and 3B and the next Section 4, WATER, the phrase "the subdivider shall provide" shall be interpreted to mean that the subdivider shall install the facility referred to, or whenever a private sewage disposal system or an individual water supply is to be provided, that the subdivider shall require, as a condition of the sale of each lot or parcel in the subdivision, that the facilities referred to in these sections shall be installed by the developer of the lots in accordance with these regulations.

#### § 3B. SEWAGE DISPOSAL IN HILLSIDE SUBDIVISIONS.

- A. When the requirements of Section 3A, subsection A, cannot be met in a hillside subdivision and when the use of private sewage disposal systems on individual lots is approved by the Commission the subdivider shall provide a written report with the Commission at the time of submittal of the final plat, which report shall include the results of subsoil investigations and statements covering:
  - (1) percolation tests
  - (2) geological strata in the area of the subdivision
  - (3) soil condition and evaporation factors.

- (4) method for protection of unstable soil strata, fill areas and natural areas from slippage as related to the effect of effluent from septic tank absorption fields.
- B. When it is apparent from the analyses and findings under § 3B. A. above that the use of individual private sewage disposal systems may cause hazards to life or proporty, the private sewage disposal system described in § 3A. subsection A.2 shall be required by the Commission.

#### S 4. WATER

- A. The subdivider shall provide the subdivision with a complete water main supply system, which shall be connected to a municipal or community water supply, except that when such municipal or community water supply is not available, the subdivider shall provide one of the following:
  - 1. A complete community water supply system to be provided in accordance with the minimum requirements of the Indiana State Board of Health.
  - 2. An individual water supply on each lot in the subdivision in accordance with the minimum requirements of the Indiana State Board of Health (Refer to Bulletin No. S. E. 7, Safe Water Supplies, current issue).
- B. The plans for the installation of a water main supply system shall be provided by the subdivider and approved by the Indiana State Board of Health (Refer to Regulation HSE, 5, 1. S. B. H.). Upon completion of the water supply installation, the plans for such system as built shall be filed with the Commission.

#### § 5. STORM AND SURFACE WATER DRAINAGE

- A. The subdivider shall provide the subdivision with an adequate storm water sewer system whenever the evidence available to the Commission indicates that the natural surface drainage is inadequate. When the surface drainage is adequate, easements for such surface drainage shall be provided. Where curbs and gutters are not provided in the street, shallow swales with low points at least three inches (3") below the subgrade of the pavement may be required by the Commission.
- B. The plans for the installation of the storm sewer system shall be prepared by a registered Professional Engineer, be provided by the subdivider and approved by the Commission. In approving such plans, the Commission may require offsite improvements of drainage outlets to adequately handle the run-off from the subdivision.
- C. The subdivider shall provide for adequate storm and surface water drainage in hillside subdivisions giving particular attention to the protection of filled land, prevention of water ponding (except as approved by the Commission), and the protection of sewer and water conduits and structures from damage caused by improper drainage.

D. Wherever cuts and fills are to be made in a subdivision, the subdivider shall provide for the interception and diversion of surface waters away from the tops of the cuts and fills and into approved drainageways.

## **§ 6. CURB AND GUTTER**

A. Wherever a proposed subdivision lies adjacent to or between other subdivisions which have been provided with curb and gutter, or whenever the proposed subdivision will average more than two and one-half (2½) lots per gross acre included in the subdivision, the Commission shall require curb and gutter to be installed on each side of the street surface.

The Commission shall require curb and gutter to be installed on the downslope side of the street surface in a hillside subdivision. Gutters may also be required along the boundaries of parking bays as necessary for drainage control or public safety.

- B. The curb and gutter shall be of one of the construction types shown in Figure 2; provided that type B. curbs only shall be installed along any street on which the finished grade is more than six per cent (6%). Curb and gutter shall be constructed according to the following specifications:
  - 1. The base for the curb and gutter shall be well-compacted on the existing base or grade.
  - 2. The minimum specifications shall be as shown for the cross-sections in Figure 2.
  - 3. All concrete used in the curb and gutter shall meet Indiana State Highway Commission Specifications.
- C. In order that erosion be held to a minimum on the downslope sides of streets in the subdivision the curb system shall be incorporated with catchbasins and culverts as necessary to carry run-off waters to the natural drainage course on the lowest level of the area.

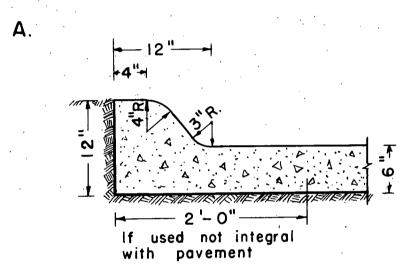
#### § 7. DRIVEWAYS

- A. The subdivider shall install approaches for each driveway connection to a street, and when the street is provided with curb and gutter the subdivider shall install curb returns on the driveways.
- B, Driveways shall be constructed so as not to impede the surface drainage system and where curbs are not required the subdivider shall provide one of the following types of improvement:
  - (a) a corrugated iron pipe at least twelve inches (12") in diameter and fourteen feet (14') in length to be placed for each driveway approach.

Figure 2

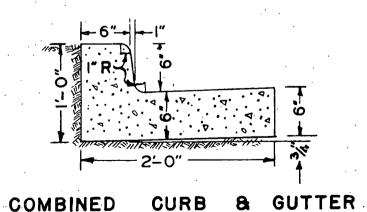
Subdivision Control Ordinance

Curb and Gutter Detail — Types A., and B. Using Portland Cement Concrete



INTEGRAL OR ROLLED CURB GUTTER

В.



(b) a properly dipped or swaled concrete pavement fourteen feet (14') in length, at least six feet (6') in width and six inches (6") thick at the entrance to each driveway, designed so as not to create a hazard to the underparts of automobiles.

#### § 8. SIDEWALKS

- A. Wherever a proposed flatland subdivision lies adjacent to another subdivision which has been provided with sidewalks, and whenever the proposed subdivision will average more than three and one-half (3½) lots per gross acre included in the subdivision, the Commission shall require sidewalks to be installed on each side of the street.
- B. In hillside subdivisions sidewalks are required to be installed on the up-hill sides of all streets, and may be required at points along the downslope side of streets as deemed necessary by the Commission in order to promote public safety.
- C. When sidewalks are required, they shall be constructed of Portland Cement Concrete, at least four (4) inches thick, and four (4) feet wide and placed one (1) foot inside the street property line.

#### § 9. STREET SIGNS

The subdivider shall provide the subdivision with standard County street signs at the intersection of all streets.

#### § 10. STREET TREES, SCREEN PLANTING AND REPLACEMENT OF NATURAL GROUND COVER

- A. Any trees or shurbs proposed to be installed in the street right-of-way by the subdivider or developer shall be approved by the Commission as to types and placement.
- B. The installation of trees and shurbs to form a tight screen, effective at all times, shall be required along the rear line of any lot which backs upon a major street, parkway or other thoroughfare.
- C. In a hillside subdivision, the natural ground cover shall not be disturbed except for the grading of those portions of the lots for building sites and for the installation of necessary improvements, including earth cuts and fills, Provided that the removal of additional natural ground cover under other circumstances may be permitted by the Commission when necessary to the successful development of the subdivision. In order that erosion caused from removal of such additional natural ground cover shall be prevented, the subdivider shall agree to the replacement of any additional natural ground cover prior to final approval of the subdivision, such replacement to be as directed by the Commission relative to method of installation and type.

# ARTICLE 6. PLAT CERTIFICATES AND DEED OF DEDICATION

The following forms shall be used in final plats:

# § 1. COMMISSION CERTIFICATE

UNDER AUTHORITY PROVIDED BY CHAPTER 174 - ACTS OF 1947, ENACTED BY THE

Approved by the Monroe County Plan 19	Commission at a meeting held
	MONROE COUNTY PLAN COMMISSION
	President
	•
EAL)	Secretary
EAL)  2. COUNTY COMMISSIONERS CERTIFICAT	
2. COUNTY COMMISSIONERS CERTIFICATION  UNDER AUTHORITY PROVIDED BY CHASSEMBLY, STATE OF INDIANA, THIS	•

(SEAL)

§ 3.	ENGINEERS CERTIFICATE			
	"I,, HEREBY CERTIFY THAT I AM A PROFESSIONAL ENGINEER (OR A REGISTERED LAND SURVEYOR) LICENSED IN COMPLIANCE WITH THE LAWS OF THE STATE OF INDIANA, THAT THIS PLAT CORRECTLY REPRESENTS A SURVEY COMPLETED BY ME ON, THAT ALL THE MONUMENTS SHOWN THEREON ACTUALLY EXIST, AND THAT THE LOCATION, SIZE, TYPE AND MATERIAL ARE ACCURATELY SHOWN.			
(SEAL	."			
\$ 4 <sub>°</sub>	DEED OF DEDICATION			
	Each final plat submitted to the Commission for approval shall carry a deed of dedication in substantially the following forms			
	"We, the undersigned, owners of the real estate shown and described herein, do hereby certify that we have laid off, platted and subdivided, and do hereby lay off, plat and subdivide, said real estate in accordance with the within plat.			
	This subdivision shall be known and designated as, and addition to All streets and alleys shown and not heretofore dedicated, are hereby dedicated to the public.			
	Front and side yard building setback lines are hereby established as shown on this plat, between which lines and the property lines of the street, there shall be erected or maintained no building or structure.			
	There are strips of ground feet in width as shown on this plat and marked "Easement", reserved for the use of public utilities for the installation of water and sewer mains, poles, ducts, lines and wires, subject at all times to the proper authorities and to the easement herein reserved. No permanent or other structures are to be erected or maintained upon said strips of land, but owners of lots in this subdivision shall take their titles subject to the rights of the public utilities.			
	(Additional dedications and protective covenants, or private restrictions, would be			

(Additional dedications and protective covenants, or private restrictions, would be inserted here upon the subdivider's initiative or the recommendations of the Commission; important provisions are those specifying the use to be made of the property and, in the case of residential use, the minimum habitable floor area).

The foregoing covenants, (or restrictions), are to run with the land and shall be binding on all parties and all persons claiming under them until January 1, 19\_\_, (a twenty-five (25) year period is suggested), at which time said covenants, (or restrictions), shall be automatically extended for successive periods of ten (10) years unless changed by vote of a majority of the then owners of the building sites covered

by these covenants, or restrictions, in whole or in part. Invalidation of any one of the foregoing covenants or restrictions, by judgment or court order shall in no way affect any of the other covenants or restrictions, which shall remain in full force and effect.

The right to enforce these provisions by injunction, together with the right to cause the removal, by due process of law, of any structure or part thereof erected, or maintained in violation hereof, is hereby dedicated to the public, and reserved to the several owners of the several lots in this subdivision and to their heirs and assigns.

10

Witness our Mands and Seals this	day of
C	(6:)
State of Indiana ) ) SS County of Monroe )	(Signature)
County of Monroe )	(Signature)
appeared, _	in and for the County and State, personally  Ledge the execution of the foregoing instrument as
his or her voluntary act and deed, for the Witness my hand and notarial seal this	

#### ARTICLE 7. VARIANCE

Where the subdivider can show that a provision of ARTICLE 4. of these regulations would cause unnecessary hardship if strictly adhered to and where, in the opinion of the Commission, because of topographical or other conditions peculiar to the site, a departure may be made without destroying the intent of such provision, the Commission may authorize a variance. Any variance thus authorized is required to be entered in writing in the minutes of the Commission and the reasoning on which the departure was justified shall be set forth.

# ARTICLE 8. AMENDMENTS, VALIDITY AND ADOPTION

(Note: Provisions of this Article should be prepared by the County Attorney. The consultant will submit a suggested form upon request.)

# PROPOSED

#### MONROE COUNTY SUBDIVISION CONTROL ORDINANCE

Final Report

of

The Special Committee on Subdivision Control

Indiana University School of Law

October 1964

Richard M. Hull
Robert E. Peterson
David D. Phoenix
F. Reed Dickerson
Chairman

# COMPREHENSIVE DEVELOPMENT REPORT

A comprehensive development program for Monroe County is based on of existing land uses, the character of the land in the County, the population and economy, and an evaluation of present trends toward industrial, residential commercial and recreational development in the County. ("Comprehensive Phan for Monroe County, Indiana," by Schellie Associates, 1963, p. 1-xxxvi). The results of this study indicates that the continuing development of Monroe County will be strongly influenced by four major factors:

- 1. The industrial and residential growth in the area around Bloomington.
- 2. Completion of Monroe Reservoir.
- 3. Presence of a major mineral resource, building limestone, in a belt that runs roughly northwest-southeast across the County.
- 4. Expansion of Indiana University.

Any land useeplan for Monroe County must consider that these factors will be a strong influence in the future development of the open land in the county. On the accompanying map some of the unincorporated land of the County has been designated primarily for specific uses in order to aid in the continuing systematic development of those parts of the County that already have begue to change from agricultural to more intensive uses. These areas are principally the following:

- 1. In the vicinity of Bloomington, particularly where utilities are available, for industrial, residential, and commercial use.
- 2. In the vicinity of Monroe Reservoir and Lake Lemon for both permanent and seasonal residential use, for public recreation use, and for commercial facilities to serve the increase in visitors.
- 3. In the area where building limestone can be found, for the utilization of the mineral resource unique to Monroe and Lawrence Counties.

Other principles used as a guide in the preparation of the proposed County Development Plan, as well as the ordinances prepared to enforce the plan, are based primarily on considerations for public health, public safety, and the stabilization of property values.

The flat bottomland along every stream was formed by the stream that flows through it. During times of heavy rainfall, the stream in flood overflows its banks and spreads out onto that bottomland. During such floods, man-made structures such as homes and business buildings that have been built on the flood plain are likely to undergo considerable damage. Open uses of land should be encouraged on the flood plain, but development of building sites should not take place there.

Most of the open land in Monroe County is in agricultural uses and has not been developed for high density uses. During the past few years several residential subdivisions have been developed in this area that are miles from existing water and sewage lines, so that they are wholly dependent upon individual water wells and septic tanks for water supply and sewage disposal. In such closely built-up areas, the high density of homes combined with the existing standards and methods of constructing water wells and septic tanks disposal fields has resulted in the pollution of a large number of private water wells by excretive and laundry wastes.

Water wells in limestone regions must be carefully sealed in order to prevent their becoming polluted by surface water, but even excellent construction is not always sufficient if houses are too close together. Where rural homes are spaced far enough apart, fewer wells are likely to become damaged because sources of pollution are more scattered.

Water supplies are limited in the eastern part of Monroe County, particularly around Monroe Reservoir, because the nature of the rocks prevents rainfall from soaking into the earth. Generally the residents of the eastern part of the County must rely on cisterns except where an artificial lake has been built for a community water supply. Soil is thin, and the effluent from septic tanks commonly is not completely absorbed but leaks to the surface and drains into ravines. Where community water and sewage facilities are not available, lots should be large enough to allow sewage wastes to remain on the property where

they originate. Lot dimensions must be established to permit maximum use of residential land, yet at the same time to provide for sufficient size where the public utilities, water and sewage, are not available that each home owner will have a reasonable opportunity to dispose of his sewage wastes with little possibility that he will endanger his or his neighbors water supplies and health. Flexible standards to accommodate areas served by sewers and water as well as those that are not, will protect both the buyer and the reputable land developer. Such standards will also be a source of guidance to the farm-owner developers who often find the pressure to sell building lots from their farms too great to resist.

Subdivisions created by the selling of single small parcels of land by mates and bounds descriptions will continue to create serious health problems throughout the rural areas of Monroe County. In order that the County planning program be able to provide guidance for these developments as well as for the Plan Commission to remain informed on the extent and character of changes in land use that will effect traffic and drainage ways, it is extremely important that every subdivision proposal be examined by the Plan Commission before it has been developed, regardless of whether it is to be recorded as a single plat or is to be left unrecorded until sold as single lots with individual metes and bounds descriptions.

Other intensive uses of land, and especially those likely to be regarded as somewhat of a nuisance or a hazard by nearby residents, should be located near each other whenever possible, and should be separated by both space (lot size) and fencing or screen planting so as to reduce the hazard and nuisance to the community.

## ROADS

One important function of a comprehensive development plan is to locate the general routes that probably will be needed for movement between existing and proposed areas of intensive land use. The present road system in Monroe County

will become increasingly inadequate to handle the volume of traffic as the County continues to develop. The purpose of designating classes of roads on the Comprehensive Development Plan Map for Monroe County is to establish projected right-of-way needs while the land is still available. In this way when it becomes necessary to widen existing roadways or to construct new ones, much of the right-of-way space will still be open and available for that use. Enforcement of the setback requirements of a Zoning Ordinance will be of substantial aid along the routes designated for future widening.

#### INDIANA UNIVERSITY

School of Law

BLOOMINGTON, INDIANA 47405

LAW BUILDING

October 30, 1964

AREA CODE 812 TEL. NO.

Mr. Maurice Jones, Chairman Board of County Commissioners, Monroe County Bloomington, Indiana

Dear Mr. Jones:

Attached is the Final Report of the Special Committee on Subdivision Control. This Committee was established by the Board of County Commissioners in September 1963 from the membership of the Seminar in Land Use, which I am privileged to conduct at the Indiana University School of Law. Its mission has been to prepare a subdivision control ordinance for Monroe County that would dovetail with the proposed master plan and the proposed zoning ordinance for the County.

The Committee's work is based for the most part on a draft originally prepared by Kenneth L. Schellie and Associates, of Indianapolis. Some changes in substance have been made, but only with the advice and approval of Mr. William J. Wayne, Secretary of the Monroe County Plan Commission, who has been most helpful throughout.

Legal research conducted as part of the mission suggests that the Master Plan Report recently submitted to the Commissioners, also by Kenneth L. Schellie and Associates, should be changed in several respects (see Part B). Although the enabling statutes of Indiana are not altogether clear on the matter, we believe that it would be the more desirable legal course to keep the master plan separate from its implementing ordinances relating respectively to zoning and subdivisions. Because such a separation involves a careful allocation of materials, specific recommendations for accomplishing this have been included in the attached report (see Parts A and C).

Again, it has been a privilege to serve the needs of Monroe County.

Sincerely,

F. Reed Dickerson

Chairman, Special Committee on

Subdivision Control

FRD:cc

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ov Board cumination

#### PART A

## PROPOSED MONROE COUNTY SUBDIVISION CONTROL ORDINANCE

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AN ORDINANCE FOR THE DEVELOPMENT THROUGH SUBDIVISION CONTROL OF THE UNINCORPORATED AREAS OF MONROE COUNTY, INDIANA

Be it ordained by the Board of County Commissioners of Monroe County,

Indiana, under the authority of Chapter 174, Acts of 1947,
as amended, General Assembly of the State of Indiana:

#### CHAPTER 1 - TERMINOLOGY

# Section 1.1 Short Title

This ordinance may be cited as the "Monroe County Subdivision Control Ordinance."

## Sec. 1.2 Definitions

As used in this ordinance, the term:

"alley" means a right of way, other than a street, road, crosswalk, or easement, that provides secondary access for the special accommodation of the abutting property;

"arterial street" means a street designed for high volume traffic;

"block" means an area that abuts a street and lies between two adjoining streets or barriers such as a railroad right-of-way or a waterway;

"Board of Commissioners" means the Board of Commissioners of Monroe County;

"building line" means the line that establishes the minimum permitted distance on a lot between the front lines of a building and the street right-of-way line;

"Commission" means the Monroe County Plan Commission:

"County" means Monroe County, Indiana;

"dead-end street" means a street that is closed to traffic at one end;

"feeder street" means a street designed to facilitate the collection of traffic from local streets and to provide circulation within neighborhood areas and convenient ways to reach arterial streets;

"improvement", with respect to a street or an alley, means its surfacing to its full thickness, beginning at the subgrade, in conformity to section 7.2;

"limited access highway" means a highway to which abutting properties are denied access;

"local street" means a street designed primarily to provide access to abutting properties;

"lot" means a parcel of land intended as a unit for transfer of ownership or separate development;

"marginal access street" means an adjacent street that is parallel to, and provides access to, an arterial street;

"person" includes a corporation, firm, partnership, association, organization, or any other group that acts as a unit;

"plat" means a map or chart that shows a division of land and is suitable to be filed for record;

"private street" means a street not established for or dedicated to the public use;

"public street" means a street established for or dedicated to the public use;

"street" means a land right-of-way that provides the principal means of access to abutting property;

"subdivision" means the division of a parcel of land shown as a unit, or as contiguous units, on the last preceding transfer of ownership for the purpose of transferring ownership, leasing, or developing any part of it.

# CHAPTER 2 - BASIC SUBDIVISION CONTROL

# Sec. 2.1 Authority to Record

The plat for a subdivision of land in the County may be recorded only if it has been approved by the Commission under chapter 3.

#### CHAPTER 3 - PROCEDURE FOR APPROVAL

## Sec. 3.1 Written Application

A person desiring approval of a plat for the purpose of recording it under section 2.1 must submit to the Commission a written application that includes the following:

- (1) A statement that the applicant desires to submit a proposed plat.
  - (2) A location map, in duplicate, that shows:
    - (A) The name and location of the subdivision.
    - (B) Existing thoroughfares related to the subdivision.
  - (C) Existing elementary schools and high schools, existing parks and playgrounds, and other existing community facilities related to the subdivision.
    - (D) Title, scale, north point and date.
- (3) A preliminary plat, in duplicate, that complies with chapter 4.
- (4) A description of the protective covenants or private restrictions, if any, to be included in the plat.

#### Sec. 3.2 Fee

A certified check or money order for \$10 plus 25 cents for each lot, and in no case for less than a total of \$15, must accompany the application.

# Sec. 3.3 Preliminary Review by Commission

The Commission shall review the application and hold it for further action or return it to the applicant with suggestions for changes. No application may be considered unless it has been on file with the Commission at least 10 days.

## Sec. 3.4 Hearing and Notice

If the Commission does not return the application, it shall set a date for a hearing, notify the applicant in writing, and notify (by publication or otherwise) any person or governmental unit likely to have an interest in the application. The cost of publishing the notice must be paid by the applicant.

## Sec. 3.5 Action on the Preliminary Plat

After the hearing on the application, the Commission shall approve the application, including the preliminary plat, and notify the applicant in writing, or tell the applicant what changes in the application are needed before approval will be given.

## Sec. 3.6 Submission of Proposed Final Plat

After approval of the preliminary plat, a proposed final plat must be filed with the Commission. The proposed final plat may include all or part of the preliminary plat and must meet the requirements of chapter 5.

# Sec. 3.7 Certificate of Improvement or Completion Bond

When filed under section 3.6, the proposed final plat must be accompanied by either:

- (1) a certificate that all improvements and installations for the subdivision required for its approval have
  been made or installed in accordance with specifications; or
- (2) a bond, or certificate of funds in escrow, that runs to the Board of Commissioners in an amount determined by the Commission to be sufficient to complete the improvements and installations in compliance with this ordinance, with surety

sedent here Metal Products Division • Armco Steel Corporation • Middletown, Ohio Corrugated Steel Pipe ● Pipe-Arch ● SMOOTH-FLO® Sewer Pipe ● MULTI-PLATE® Structures ● Liner Plate ● Sheeting ● FLEX-BEAM® Guardrail ● ECON-O-BEAM Guardrail ● Pipe Piling ● Pile Shell Steel Water Pipe • Industrial Piping • Water Control Gates • Retaining Walls • Steel Buildings

satisfactory to the Commission, and specifying the time for completing the improvements and installations.

# Sec. 3.8 Action on the Final Plat

Within a reasonable time after the final plat has been submitted, the Commission shall (1) approve the plat and affix on it the Commission's seal, the signature of the President, and the signature of the Secretary; or (2) disapprove it, record the reasons for its disapproval, and give the applicant a copy.

#### CHAPTER 4 - REQUIREMENTS FOR PRELIMINARY PLAT

## Sec. 4.1 Content of Preliminary Plat

To be approved under chapter 3, a preliminary plat must show the following:

- (1) Name of the subdivision.
- (2) Names and addresses of the owner, the subdivider, and the city planner, land planning consultant, engineer, or surveyor who prepared the plat.
- (3) Tract boundary lines, with dimensions, bearings, angles, and references to section, township, and range lines or corners.
  - (4) Lot layout, showing dimensions and numbers.
- (5) Parcels to be dedicated or reserved for schools, parks, playgrounds, and other public or community purposes.
  - (6) Building setback or front-yard lines.
- (7) Streets and rights-of-way in or adjoining the subdivision, by name, width, approximate gradient, type and width of pavement, and including curbs, sidewalks, crosswalks, trees, and other relevant information.
  - (8) Location, width, and purposes of easements.
  - (9) Location and approximate size or capacity of utilities.
- (10) Contours at vertical intervals of 2 feet if the general slope is less than 10 percent, and at vertical intervals of 5 feet if it is 10 percent or greater.
  - (11) Soil water levels (February through June).
  - (12) Legend or notes.
  - (13) Other features significantly affecting the subdivision.
  - (14) Scale, north point, and date.

#### Sec. 4.2 Attachment for Private Sewage Disposal System

If a private sewage disposal system is to be used on any lot, the preliminary plat must be accompanied by a statement, certified by a registered professional engineer, qualified sanitarian, or certified professional geologist, showing the results of percolation tests made as prescribed in the current issue of Bulletin No. S. E. 8, Indiana State Board of Health.

#### Sec. 4.3 Form of Preliminary Plat

To be approved under chapter 3, a preliminary plat must be drawn to a scale of 50 feet to 1 inch. However, if the resulting plat would be over 36 inches in its shortest dimension, a scale of 100 feet to 1 inch may be used.

#### CHAPTER 5 - REQUIREMENTS FOR FINAL PLAT

## Sec. 5.1 Content of Final Plat

- (a) The final plat may include all or part of the approved preliminary plat.
- (b) To be approved under chapter 3, a final plat must show the following:
  - (1) Name of the subdivison.
  - (2) Names and addresses of the owner and the subdivider.
  - (3) Boundary lines, by metes and bounds, that provide a survey of the tract (with dimensions and angles).
    - (4) Lot layout, showing dimensions and numbers.
  - (5) Parcels to be dedicated or reserved for schools, parks, playgrounds, and other public or community purposes.
    - (6) Building setback or front yard lines, with dimensions.
  - (7) Street lines, with dimensions in feet and hundredths of feet and with angles to street, alley, and lot lines. For a street bordering the subdivision, however, only the nearer half, measured from the center line, need be platted.
  - (8) Existing or recorded streets that intersect the boundaries of the tract.
  - (9) Distances and directions to the nearest established street corners or official monuments.
    - (10) Street names.
    - (11) Complete curve notes for all curves.
    - (12) Location of easements for utilities, with limitations.
  - (13) Locations, types, materials, and sizes of monuments and lot markers.

- (14) Plans and specifications for the improvements required by chapter 7.
  - (15) Restrictive covenants running with the land.
- (16) Source of title, as shown by the most recent entry in the books of the County Recorder.
  - (17) Scale, north point, and date.
- (18) Certification by a registered professional engineer or registered land surveyor, in the form prescribed by section 8.1, that the plat adequately reflects his survey.
- (19) Deed of dedication of streets and other property for public use, in the form prescribed by section 8.3.
- (20) Form of certificate of approval by the Commission prescribed by section 8.4.

# Sec. 5.2 Accuracy

- (a) To be approved under chapter 3, a final plat must show boundary lines that are accurate to 1 foot in 5000 feet.
- (b) A final plat may not be approved under chapter 3 unless it shows the following:
  - (1) Reference corners.
  - (2) Location of streets intersecting tract boundaries.
  - (3) Tract boundaries.
  - (4) Locations of easements.
  - (5) Dimensions of parcels reserved for public or community purposes.

# Sec. 5.3 Form of Final Plat

(a) To be approved under chapter 3, a final plat must be drawn to a scale of 50 feet to 1 inch. However, if the resulting plat would be

over 36 inches in its shortest dimension, a scale of 100 feet to 1 inch may be used.

(b) To be approved under chapter 3, a final plat must be accompanied by 3 black or blue line prints. However, to conform to modern drafting and reproduction methods, 3 black line prints and a reproducible print may be used.

CHAPTER 6 - CONDITIONS FOR APPROVAL OF FINAL PLAT: STANDARDS OF DESIGN

# Sec. 6.1 Conformity with Standards of Design

The final plat of a subdivision may not be approved by the Commission unless it conforms to the standards in the Monroe County Comprehensive Plan and to the following standards of design.

# Sec. 6.2 Streets: Location and Arrangement

- (a) The proposed street layout must be reasonably related to the topography of the land so as to produce usable lots and streets of reasonable gradient. It must provide for access to all lots within the subdivision.
- (b) Where appropriate, proposed streets must be extended to the boundary of the subdivision to allow for normal circulation of traffic in the vicinity.
- (c) Provision must be made for the continuation or projection of existing streets in the surrounding area except where impractical or undesirable because of topographical or design considerations.
- (d) If a proposed subdivision contains or borders on a railroad right-of-way or limited access highway, a marginal access street or a street parallel to and on each side of the right-of-way at a distance suitable for the appropriate use of the intervening land must be provided.

# Sec. 6.3 Streets: Dead-End Streets

- (a) Permanently dead-ended streets must not be longer than 600 feet, as measured from the nearest intersecting street. They must be provided at the closed end with a turnaround having a diameter of at least 100 feet or other arrangement for the convenient turning of vehicles.
- (b) A street may be permitted to be temporarily dead-ended where it is proposed to be and reasonably should be extended beyond

the plat limits but has not yet been so constructed. Temporarily deadended streets longer than 250 feet must be provided with a turnaround.

## Sec. 6.4 Streets: Minimum Right-of-Way Widths

Street rights-of-way must conform in width with those specified in the Thoroughfare Plan of the Monroe County Comprehensive Plan. However, if none is specified, they must conform with the following:

- (1) Where practicable, the minimum width of right-of-way of local or marginal access streets is 50 feet. If topographical or geological conditions prevent compliance, the Commission may authorize a narrower street right-of-way, but not less than 40 feet wide.
- (2) A subdivision that is platted along only one side of an existing street must provide one-half of the minimum right-of-way, measured from the center-line of the street.

## Sec. 6.5 Streets: Grades

- (a) The steepest permissible grade for arterial streets is 6 percent and for other streets and for alleys is 10 percent. Where topographical or geological conditions prevent compliance, the Commission may authorize an increase in the permissible grade of a feeder or local street or of an alley to 20 percent, but only for straight distances of less than 150 feet.
- (b) The lowest permissible grade for a street gutter is 0.3 percent.

# Sec. 6.6 Streets: Alignment

(a) Between reverse curves there must be a tangent, measured along the center line, that is at least 100 feet long for arterial streets and at least 40 feet long for feeder and local streets.

(b) Where a deflection angle of more than 10 degrees in the alignment of a street occurs, a curve with the following minimum radius, measured along the center line, must be provided:

Street type	Minimum radius of curvature
Arterial streets	500 feet
Feeder streets and parkways	300 feet
Local streets	200 feet

Where topographical conditions justify a deviation from these standards, the Commission may authorize the use of a smaller radius of curvature. In no case may the radius of curvature be less than 80 feet.

(c) Direct visibility must be maintained along the center line of a street or parkway, as follows:

Street type	Minimum sight distance
Arterial street	500 feet
Feeder streets and parkways	300 feet
Local streets	150 feet

## Sec. 6.7 Streets: Special Types

The Commission may prescribe appropriate standards for the design of parkways or other special types of streets.

## Sec. 6.8 Streets: Intersections

- (a) Intersections involving the junction of more than 2 streets must be avoided.
- (b) Streets must intersect one another as nearly as possible at right angles. In no case may the angle of intersection be less than 60 degrees.
- (c) Property line corners at street intersections must be rounded at a radius of at least 20 feet, and at street and alley inter-

sections at a radius of at least 15 feet. Where conditions require, the Commission may authorize a greater radius. The Commission may permit the use of comparable chords in place of rounded corners.

(d) Street jogs must not have center line offsets of less than 125 feet.

## Sec. 6.9 Alleys

- (a) Alleys must be provided in commercial and industrial districts where needed for loading and unloading or for access.
  - (b) Alleys shall be discouraged in residential districts.
  - (c) The right-of-way width for alleys must be at least 20 feet.

## Sec. 6.10 Blocks

- (a) Blocks must not be longer than 1250 feet nor shorter than 400 feet. Pedestrian crosswalks not less than 10 feet wide may be required in blocks longer than 900 feet where necessary for proper access to schools, playgrounds, shopping centers, transportation, and other community facilities.
- (b) Blocks must be wide enough to provide for two tiers of lots of appropriate depth.
- (c) So far as required by topography or by the location of limited access highways, railroads or waterways, the Commission may adjust block design standards.

## Sec. 6.11 Easements

Where necessary, utility easements at least 12 feet wide must be provided across lots or centered on rear or side lots, the exact location to be determined in cooperation with the appropriate utility. Where the easement is located along a lot line, one-half must be taken from each lot.

#### Sec. 6.12 Lots: Location

- (a) Except as provided in subsection (b), each lot must abut on a public street.
- (b) Where the Commission finds that topographical conditions will not permit full use of all desirable building sites in the subdivision if lots are required to abut on public streets, it may authorize the use of private drives, subject to the following conditions:
  - (1) No private drive may serve more than 3 lots.
  - (2) Private drives must be surfaced to a width of at least 16 feet and must conform to the construction standards of section 7.5 of this ordinance.
  - (3) At least 3 off-street parking spaces, in addition to the 1 off-street parking space per residence required by the Monroe County Zoning Ordinance, must be provided for each lot served by a private drive.
  - (4) Maintenance of a private drive must, by appropriate provision in the plat, be made the joint and several responsibility of the owners of lots served by the drive.

## Sec. 6.13 Lots: Sizes

- (a) The widths and areas of lots must conform to the minimum requirements of the Monroe County Zoning Ordinance for the district in which the subdivision is located.
- (b) Where the degree of slope of land in a subdivision is 10 percent or greater, the minimum average lot width for single-family dwellings that have water and sewerage is as follows:

Degree of slope	Minimum average lot width (feet)
10% or more but less than 16%	95
16% or more but less than 21%	100
21% or more but less than 26%	115
26% or more but less than 31%	140
31% or more	150

- (c) Where a public water system or public sewage system is not available, the Commission may require that percolation tests be made at the instance of the subdivider to assure proper operation of individual water systems and individual sewage disposal systems. If the tests show the necessity for a greater minimum lot area or width than that established by the Monroe County Zoning Ordinance, the Commission shall require that lot size be adequate for the system to be installed.
- (d) The width and area of lots designed for commercial or industrial uses must be adequate to provide for off-street service and parking facilities required by the type of use and development proposed.

#### Sec. 6.14 Corner Lots

Corner lots for residential use must have sufficient extra width to permit the minimum building setback from and proper orientation to both streets.

# Sec. 6.15 Double Frontage Lots

Double frontage and reverse frontage lots must be avoided, except where needed to provide separation of residential development from arterial streets or to overcome specific disadvantages of topography and orientation. A planting screen easement at least 10 feet wide, across which there is no right of access, must be provided along the lines of lots abutting the arterial street or other disadvantageous use.

#### Sec. 6.16 Lot Lines

Side lot lines must be approximately at right angles to straight streets and on radial lines to curved streets.

## Sec. 6.17 Building Lines

The setback provisions of the Monroe County Zoning Ordinance must be applied in determining building lines, except that where it is shown that, because of topography, those provisions are inappropriate to particular lots, the Commission may authorize a lesser setback than would otherwise be required. In no event may a building line be less than 5 feet from a street right-of-way.

## Sec. 6.18 Public Sites and Open Spaces

- (a) Where a site for a park, school, playground or other public use, as shown on the Monroe County Comprehensive Plan, is located wholly or partly within the subdivision, the Commission may require that the proposed public space be dedicated to the public or reserved for the 2-year period immediately following the date of approval of the final plat. If the appropriate governmental agency adopts a resolution of intent to buy the reserved area, the reservation period must be extended 1 year.
- (b) An area that is incapable of being developed into a usable building site and is unsuitable for inclusion in a lot in a proposed subdivision may be offered for dedication as a public use area. Upon acceptance of the area by the Commission, a deed dedicating the area to the public and providing for a permanent easement of access to the area must be recorded by the owner.

CHAPTER 7 - CONDITIONS FOR APPROVAL OF FINAL PLAT: IMPROVEMENTS

## Sec. 7.1 Monuments and Markers

- (a) A monument must be set:
- (1) at the apex of each angle in the subdivision boundary line; and
  - (2) at each intersection of street rights-of-way lines.
- (b) Except where a monument is required, a marker must be set:
- (1) at the beginning and end of each curve on a street or alley right-of-way line;
- (2) at each point where a lot line intersects the curve of a street or alley right-of-way line; and
  - (3) at the apex of each angle in the property line of a lot.
- (c) A monument must be of stone, pre-cast concrete, or concrete poured in place and must be at least 4 inches by 4 inches by 30 inches. It must be marked on top with an iron or copper dowel set flush with the top of the monument or deeply scored on top with a cross. A marker must be an iron pipe or a steel bar at least 30 inches long and at least 5/8ths of an inch in diameter.
- (d) A monument or marker must be placed so that the center of the dowel, scored cross, pipe, or bar coincides exactly with the intersection of the lines to be marked, and must be set so that the top of the monument or marker is level with the finished grade.

#### Sec. 7.2 Streets and Alleys

(a) Streets and alleys must be (1) graded, surfaced, and improved to the dimensions required by the plans, profiles, and cross sections prepared by a registered professional engineer, (2) approved by the Commission, and (3) provided by the subdivider.

- (b) The grading, material types, and methods of construction of streets and alleys must conform to Standard Specifications for Road and Bridge Construction and Maintenance 1957 of the State Highway Commission of Indiana.
- (c) A local street in a flatland subdivision must be surfaced to a width of at least 28 feet. A local street in a hillside subdivision must be surfaced to a minimum width to be determined on the basis of topographical considerations and average lot density, generally as follows:

Average Lot Size (Square Feet)	Pavement Width (Feet)		
12,000 or more but less than 16,000	26		
16,000 or more but less than 31,000	24		
31,000 or more	22		

- (d) An alley must be surfaced to its full width.
- (e) If a street in a hillside subdivision is surfaced to a width of less than 24 feet, enough off-street parking bays must be provided to eliminate on-street parking. These bays must be integral to the street, must be on the uphill side of the street, and must be so located that they are readily accessible to the lots to which they relate. They must contain 3 spaces for each residential lot in addition to the space for each residence required by the Monroe County Zoning Ordinance. However, if additional parking spaces are provided on a lot, the required number of parking bay spaces for that lot is reduced by the number of those additional spaces.
- (f) Adequate subsurface drainage for streets or alleys must be provided before a street or alley is surfaced. Subsurface drainage pipe, when required, must be coated corrugated pipe or a similar type, at least 12 inches in diameter, and approved by the Commission.

(g) The surface of a street or alley must be of portland cement concrete or a flexible pavement and must be constructed in accordance with design characteristics at least equal to those given below:

#### Kind of Pavement & Thickness

#### Kind of Street

Portland Cement Concrete	Arterial	Feeder	Local	Alley
Balanced Design Thickness*	10"-7"-10"	811-5 <sup>1</sup> 211-811	71211-511-71211	<del>ju</del>
Uniform Design Thickness	8 <u>1</u> 411	61211	6"	611

\* Intersections must be of uniform design using edge thickness.

#### Flexible∺

Asphaltic Concrete	2"	1 <sup>1</sup> 2"	<b></b>	<del>,-</del>
Bituminous Coated Aggregate	2"	211	2"	2"
Water Bound Macadam	8"	811	611	6"
Total Thickness	12"	11 <sup>1</sup> 2"	8"	8"

\*\* For intersections and parking strips on local streets, feeder street design characteristics apply.

(h) Upon the completion of the street and alley improvements, plans and profiles as built must be filed with the Commission.

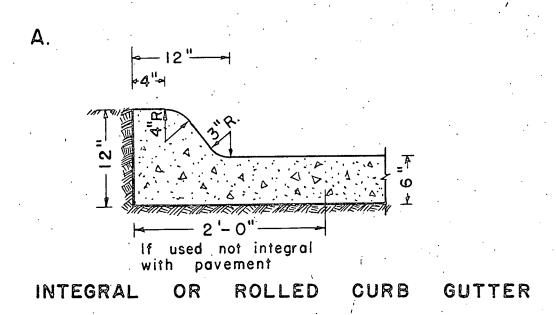
# Sec. 7.3 Curbs and Gutters

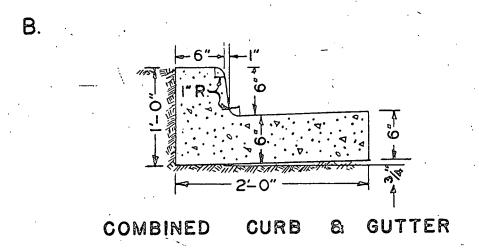
- (a) If a proposed subdivision lies adjacent to or between other subdivisions that have been provided with curb and gutter, or if it will average more than 2½ lots per gross acre, curb and gutter must be installed on each side of the street surface.
- (b) In a hillside subdivision, curb and gutter must be installed on the downslope side of the street surface.
- (c) The Commission may require the installation of gutters along the boundaries of parking bays so far as necessary for drainage control or public safety.

- (d) Curbs and gutters must be of construction types shown in Figure 1. However, only type B curbs may be installed along a street on which the finished grade is more than 6 percent. Curb and gutter must meet the following specifications:
  - (1) The base must be well-compacted on the existing base or grade.
  - (2) Curb and gutter must comply with the cross-sections in Figure 1.
  - (3) Concrete used in the curb or gutter must meet Indiana State Highway Commission specifications.
- (e) To hold erosion to a minimum on the downslope sides of streets, the curb system must be integrated with catchbasins and culverts so far as necessary to carry run-off waters to the natural drainage course on the lowest level of the area.

Figure 1 Subdivision Control Ordinance

Curb and Gutter Detail — Types A., and B.
Using Portland Cement Concrete





#### Sec. 7.4 Sidewalks

- (a) If a proposed flatland subdivision lies adjacent to or between other subdivisions that have been provided with sidewalks, or if the subdivision will average more than 3 lots per gross acre, sidewalks must be installed on each side of the street.
- (b) In a hillside subdivision sidewalks must be installed on the up-hill sides of all streets.
- (c) If it considers them necessary, the Commission may require sidewalks along the downslope side of streets.
- (d) If sidewalks are required, they must be made of portland cement concrete at least 4 inches thick and 4 feet wide, and must be placed 1 foot inside the street property line.

#### Sec. 7.5 Driveways

- (a) Approaches must be installed for each driveway connection to a street. Driveways must be constructed so as not to impede the surface drainage system.
- (b) If a street is provided with curb and gutter, curb returns must be installed on the driveways. If it is not provided with curb and gutter, one of the following must be installed:
  - (1) A corrugated iron pipe at least 12 inches in diameter and 14 feet long to be placed under each drive-way approach.
  - (2) A dipped or swaled concrete pavement at least

    14 feet long, 6 feet wide, and 6 inches thick to be

    placed at the entrance to each driveway and designed so

    as not to create a hazard to the underparts of automobiles.

#### Sec. 7.6 Street Signs

The subdivider must install standard county street signs at the intersections of all streets.

#### Sec. 7.7 Storm and Surface Water Drainage

- (a) If, in the opinion of the Commission, the natural surface drainage is inadequate, an adequate storm water sewer system must be installed. The plans for such a system must be prepared by a registered professional engineer, approved by the Commission, and provided by the subdivider. In approving the plans, the Commission may require off-site improvement of drainage outlets to adequately handle the drainage from the subdivision.
- (b) If, in the opinion of the Commission, the natural surface drainage is adequate, easements for the natural surface drainage must be provided.
- (c) If curb and gutter are not installed, the Commission may require the subdivider to construct shallow swales on either side of the street with low points at least 3 inches between the subgrade of the payement.
- (d) In a hillside subdivision, adequate storm and surface drainage must be provided, with particular attention to the protection of filled land, the prevention of water ponding (except as approved by the Commission), and the protection of sewer or water conduits and structures from damage caused by improper drainage.
- (e) If cuts and fills are to be made in a subdivision, the subdivider must provide for the interception and diversion of surface waters away from the tops of the cuts and fills and into approved drainageways.

#### Sec. 7.8 Water Supply

- (a) If a municipal or community water supply is available, a complete water main supply system that connects to the municipal or community water supply must be installed. The plans for installation must be approved by the Indiana State Board of Health (see Regulation HSE) and provided by the subdivider. Upon completion of the system, the plans for the system as built must be filed with the Commission.
- (b) If a municipal or community water supply is not available, the subdivider must:
  - (1) install a complete community water supply system in accordance with the minimum requirements of the Indiana State Board of Health; or
  - (2) require on each lot, as a condition of sale, the installation of an individual water supply in accordance with the minimum requirements of the Indiana State Board of Health (see Bulletin No. S.E. 7, current issue).

# Sec. 7.9 Sewage Disposal in Flatland Subdivisions

- (a) If an existing approved sanitary sewer outlet is available, a complete sanitary sewer system that connects with that outlet must be installed. The plans for installation must be approved by the Indiana State Board of Health (see Regulation HSE 14) and provided by the subdivider. Upon the completion of the system, the plans for the system as built must be filed with the Commission.
- (b) If an existing approved sanitary sewer outlet is not available, the subdivider must:
  - (1) install complete sanitary sewer system to convey the sewage to a treatment plant, the installation to be in accordance with minimum requirements of the Indiana State

Board of Health and those of the Indiana Stream Pollution Control Board; or.

(2) require on each lot, as a condition of sale, the installation of an individual sewage disposal system in accordance with the minimum standards of the Indiana State Board of Health (see Bulletin No. S.E. 8, current issue).

Each individual sewage disposal system must consist of a septic tank with a capacity of at least 1000 gallons and a tile absorption field that provides at least 250 square feet for each bedroom in the dwelling placed on the lot. This method of sewage disposal may not be used if the water table is less than 30 inches below the ground surface.

## Sec. 7.10 Sewage Disposal in Hillside Subdivisions

The requirements for sewage disposal in hillside subdivisions are the same as those for sewage disposal in flatland subdivisions, except that:

- (1) if an existing approved sanitary sewer outlet is not available, the subdivider must, when he submits the final plat, make a written report to the Commission that includes the results of subsoil investigations and information covering:
  - (A) percolation tests;
  - (B) geological strata in the area of the subdivision;
    - (C) soil condition and evaporation factors; and
  - (D) a method for protecting unstable soil strata, fill areas, and natural areas from slippage as related

to the effect of effluent from septic tank absorption fields; and

(2) if the analysis and findings show that the use of individual sewage disposal systems may cause hazards to life or property, the sanitary sewage system described in section 7.9 (b) (l) shall be required by the Commission.

# Sec. 7.11 Street Trees, Screen Planting, and Replacement of Natural Ground Cover

- (a) Each tree or shrub proposed to be installed in the street right-of-way must be approved by the Commission as to type and placement.
- (b) Trees or shrubs that form a tight screen, effective at all times, must be planted along the rear line of each lot that backs on an arterial street, parkway, or other thoroughfare.
- (c) The natural ground cover must not be disturbed in a hillside subdivision, except that:
  - (1) it may be removed in grading the parts of lots that are to be used for building sites or for the installation of necessary improvements; and
  - (2) it may be removed by permission of the Commission, if removal is necessary for the successful development of the subdivision.

To prevent erosion caused by the removal of the natural cover under clause (2), the subdivider must agree, before final approval of the subdivision, to replace it with ground cover using a type and a method of installation prescribed by the Commission.

# Sec. 7.12 Plans and Specifications of Improvements

The certificate of improvements, completion bond, or certificate of funds in escrow filed with the Commission under section 3.7 must be accompanied by plans and specifications for all improvements that are completed or anticipated.

#### Sec. 7.13 Variance

If a subdivider shows that a requirement imposed by sections

7.1 - 7.11 would cause unnecessary hardship and that typographical or
geological conditions at the site make possible some departure from
the requirement without materially affecting its purpose, the Commission
may to that extent authorize a variance. To be effective, a variance
and the reasons for it must be recorded in the minutes of the Commissionn.

#### CHAPTER 8 - FORMS FOR USE IN FINAL PLAT

#### Sec. 8.1 Engineer's Certificate

The following form must be used on final plats for the purposes of section 5.1 (b) (18):

I certify that I am a registered professional engineer [or registered land surveyor] licensed under the laws of Indiana; that this plat accurately represents a survey made by me on \_\_\_\_\_\_\_, 19\_\_; that the monuments shown on it exist; and that their locations, sizes, types, and materials are accurately shown.

(SEAL)

#### Sec. 8.2 Deed of Dedication

Substantially the following form must be used on final plats for the purposes of section 5.1 (b) (19):

We, the owners of the real estate described below, certify that we have subdivided and platted it according to this plat.

This subdivi	sion is call	.ea	<del></del>	,
an addition to		•	The	streets and
alleys shown, so	far as they	have not alread	y been	so dedicated,
are dedicated to	the public.			

Front and side yard setback lines are established as shown on the plat. Between them and the property lines of the adjacent streets no building or other structure may be erected or maintained.

The strips of ground feet wide that are shown on
the plat and marked "easement" are owned by the owners of the
lots that they respectively affect, subject to the rights of
public utilities for the installation and maintenance of water
and sewer mains, poles, ducts, lines, and wires. Buildings or
other structures may not be erected or maintained on these strips.
[ Additional dedications and private restrictions
desired by the subdivider or Commission, such as
those affecting use and habitable floor area, may
be inserted here.
These restrictions run with the land and bind all per-
sons until [a 25-year period is
suggested]. At that time, and at the close of each succeeding
10-year period, each currently effective restriction is ex-
tended for the succeeding 10-year period, unless before the
close of the current period a majority of the current
owners vote to change it. Invalidation of a restriction by
a court does not affect other restrictions not otherwise
invalidated.
These restrictions may be enforced by injunction,
including action by due process of law to remove all or
part of any offending structure, brought by the owner of
any lot in the subdivision.
Signed and sealed, 19
(Signature)
(SEAL)
(Signature)

(Notarization form)

# Sec. 8.3 Commission Certificate

The following form must be used on final plats for the purposes of sections 3.8 and 5.1 (b) (20):

Under the authority of Chapter 174, Acts of 1947, as amended, General Assembly of the State of Indiana, and the Monroe County Subdivision Control Ordinance, this plat was approved by the Monroe County Plan Commission at a meeting held

Monroe	County	Plan	Commissi	on a	t a meeting held
<del>,</del>		· · · .	<u> </u>	19_	_•
1			Contraction of the second	-	•
				*	MONROE COUNTY PLAN COMMISSION
		 		· ,	(President)
(SEAL)					
					(Secretary)

#### CHAPTER 9 - MISCELLANEOUS

#### Sec. 10.1 Severability

If a part of this ordinance is invalid, all valid parts that are severable from the invalid part remain in effect. If a part of this ordinance is invalid in one or more of its applications, the part remains in effect in all valid applications that are severable from the invalid applications.

# Sec. 10.2 Effective Date

This ordinance takes effect upon its passage and approval by the Board of County Commissioners.

#### PART B

#### RECOMMENDED CHANGES IN PROPOSED MASTER PLAN

- (1) The Master Plan should be separated from the proposed Zoning Ordinance and the proposed Subdivision Control Ordinance and separately adopted, no later than the passage of these two implementing ordinances. It should consist of the materials on pages I through XXXV (explanation of the Master Plan) and the final (unpaged inserts) "sheet 1 of 2" (Comprehensive Development Plan) and "sheet 2 of 2" (Master Plan of Thoroughfares) of the Master Plan Report of Schellie Associates, dated December 1963.
- (2) Most of the materials on pages 55-56 (Title II, Official Thoroughfare Plan, Subdivision Control Ordinance) and 78 (Title IV, Public Facilities Plan of the same ordinance) of the Master Plan Report may be omitted as surplusage. The rest should be absorbed into the proposed Zoning Ordinance and the proposed Subdivision Control Ordinance (see Parts A and C).
- (3) For ease of understanding, the legend on the insert sheet designated "Comprehensive Development Plan" should be revised to show what elements comprise the Thoroughfare Plan, what elements comprise the Land Use Plan, and what elements comprise the Public Facilities Plan. (This has been done by Schellie Associates in the more recent plan proposed for Brown County.)
- (4) It is also recommended that the terminology used in the Master Plan be improved and standardized. In particular, it is recommended that, instead of "Master Plan," "Comprehensive Master Plan," or "Comprehensive Development Plan," the terms now used, the single term "Comprehensive Plan" be adopted. This term, which is used in the statute establishing a

planning commission for Marion County, avoids the word "Master," which has unfortunate connotations in Monroe County. The terms and concepts in the legend on the sheet designated "Comprehensive Development Plan" are not entirely consistent with those used in the proposed Zoning Ordinance and the proposed Subdivision Control Ordinance. In addition, the applicable definitions in those ordinances (e.g., "local street") should be incorporated into the Comprehensive Plan.

#### PART C

#### RECOMMENDED CHANGES IN PROPOSED MONROE COUNTY ZONING ORDINANCE

- (1) Section 3.3(c) should be amended by striking out the word "Master" and substituting the words "Monroe County Comprehensive".
- (2) Sections 6.1(a) and 6.1(b) should be amended to read respectively as follows:
  - (a) An action of the following kinds may not be taken unless the Planning Coordinator, or written application, finds that it is consistent with the Monroe County Comprehensive Plan, this ordinance, and the Monroe County Subdivision Ordinance, and issues an improvement location permit:
    - (1) Giving of permission to erect or change any structure on or in the land, except one incidental to an agricultural use.
      - (2) Establishment of an SC District under section 2.3.
      - (3) Change in an FP District under section 2.4.
      - (4) Grant of a special exception under section 3.3.
  - (b) The filing fee, which is payable to the Planning Coordinator. is \$2, except that in the case of a special exception, it is \$15.
- (3) The following new section should be inserted after section 6.4, and sections 6.5, 6.6, and 6.7 should be renumbered 6.6, 6.7, and 6.8, respectively:

# Sec. 6.5 Protection of Street Rights-of-Way

An improvement location permit may not be issued unless the street rights-of-way proposed by the Thoroughfare Plan of the Monroe County Comprehensive Plan will be protected from encroachment. For this purpose, the proposed street right-of-way lines shall be treated as if they were

the front lines of the lots and tracts that abut the street.

(4) Section 7.5(a) should be amended by striking out the word "enforcing" and substituting the word "under".

#### PART D

#### IMPLEMENTING RESOLUTIONS

1. Adoption of Comprehensive Plan and Recommendation of Implementing
Ordinance by Monroe County Plan Commission.

WHEREAS the attached Comprehensive Plan, a proposed Zoning Ordinance, and a proposed Subdivision Control Ordinance for Monroe County, Indiana, have been submitted to the Monroe County Plan Commission of the County; and

1	WHEREAS a	public hear	ing on the	Comprehensi	ive Plan, the	proposed
Zonin	g Ordinanc	e, and the	proposed Su	bdivision (	Control Ordina	ınce was held
at		on		, 19 <u></u> , beg	ginning at	o'clock
_M., 1	notice hav	ing been pu			, 19, i	
<del></del>	<del></del> ;	, a new	spaper of g	eneral circ	culation in Mo	onroe County,
India	na;	•				

IT IS RESOLVED by the Monroe County Plan Commission under Chapter 174 of the Acts of 1947, as amended, General Assembly of the State of Indiana, that the attached Comprehensive Plan is adopted and that the attached proposed Zoning Ordinance and proposed Subdivision Control Ordinance are recommended to the Board of County Commissioners of the County for passage.

County Commissioners to present the	e Comprehensive Plan, proposed Zoning
Ordinance, and proposed Subdivision	Control Ordinance.
ADOPTED	, 19
•	President, Monroe County Plan Commission
	·
	·
	Members, Monroe County Plan Commission
	by Board of County Commissioners  County Commissioners of Monroe County,
Indiana, under Chapter 174 of the A	
Assembly of the State of Indiana th	at the attached Comprehensive Plan
for Monroe County, recommended by t	he Monroe County Plan Commission on
, 19, is	adopted.
ADOPTED , 19	
`	
• - 1	President
ATTEST: Secretary	<del></del>
Members voting Aye:	Members voting Nay:

CURRENT ORIGINALS - SPECIALS

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Upon written permission of the Engineer, systems composed entirely of mechanical joints may be back-filled prior to testing, it being understood that the Contractor assumes the risk of re-excavating to the pipe in the event the system fails to meet the requirements of the pressure test.

Depending on traffic conditions, public hazard, or other reasons, the Engineer may direct when tests of completed sections of mains shall be made, and he may order such tests to be made in relatively short sections in order that hazardous sections may be backfilled promptly.

VALVE BOXES Valve boxes shall be provided for all buried valves unless they are houses in valve chambers. Valve boxes shall be made of good quality cast iron and shall be of the sectional type. The lower section shall be a minimum of five (5) inches in diameter, enlarged to fit around the bonnet of the valve if a two section box is used, or to fit a circular or oval base section if a three section box is used. The upper section shall be arranged to slide or screw down over the adjoining lower section, and shall be full diameter throughout. Valve boxes shall be provided with cast iron lids or covers. Lids or covers shall be marked for the service for which the valve is used, such as "Water", "Gas", etc. The over-all length of valve boxes shall be sufficient to permit the top to be set flush with the established ground surface grade.

Valve boxes shall be set truly vertical and so supported until sufficient backfill has been placed as to insure the vertical alignment of the box.

GATE VALVES This item shall include the furnishing and installation of the valves, excavation and backfill, disposal of excess excavated material, and all such other work as may be necessary for a complete installation ready for use. Valves shall be Class "A" valves as specified in Section LD for #150 working and 300# test pressure. They shall open by turning to the left, and shall be fitted with standard operating nut. Valves shall be Eddy Valve Co. or valve equal in every respect to the Eddy valves now in place, and approved in writing by the Owner in advance of ordering.

#### SPECIFICATIONS FOR

#### BURIED CAST IRON PIPE AND FITTINGS

GENERAL All labor, materials, equipment, services and tools necessary for the construction of all buried cast iron pipe, fittings and specials required on this Contract shall be furnished and installed in conformance with the following specifications.

MATERIALS All cast iron pipe, fittings and appurtenances incorporated in the work performed under this Contract shall conform to the following specifications.

PIPE AND FITTINGS All cast iron pipe and fittings shall conform as to dimensions, weight, character of materials, allowable variations in diameter and thickness, method of manufacture, marking and coating to the following specifications.

Bell & Spigot Pipe Mechanical Joint Pipe

Mechanical Joints

Bell & Spigot or Mechanical Joint Fittings

Flanged Pipe

Flanged Fittings

American Standards Association A 21.6 or A 21.8

American Standards Association A 21.11

A.W.W.A. C100-08 or American Standards Association A 21.10

American Standards Association A 21.6 or A 21.1 with flanges faced and drilled to A.S.A. Class 125

A.W.W.A. 1908 Specifications or American Standards Association A21.2

The weight and class of pipe/fittings to conform with these specifications to be incorporated in the work included in this Contract shall be as set forth in the Project Specifications. The thickness class for buried pipe and fittings shall be as recommended by American Standards Association for Condition B, for the depth of trench stated in the Project Specifications or Contract Drawings. Interior and exterior of pipe and fittings, except wall castings, shall be tar-coated, unless otherwise provided in the Project Specifications. Exterior of wall castings shall be uncoated.

and

EXCAVATION Excavation and backfill in open cut or tunnel for buried cast iron pipe and fittings shall be carried out in compliance with the General Specifications for Excavation, Backfill and Foundations.

LAYING Proper and suitable tools and appliances for the safe and convenient handling and laying of the pipes and fittings shall be used. Great care shall be taken to prevent the pipe coating from being damaged, particularly on the inside of the pipes and fittings. All pieces shall be carefully examined for defects, and no piece shall be laid which is known to be defective. If any defective piece should be discovered after having been laid, it shall be removed and replaced with a sound one in a satisfactory manner by the Contractor at his own expense. The pipe and fittings shall be thoroughly cleaned until they are accepted in the completed work, and, when laid, shall conform accurately to the lines and grades or depth of cover below established grade, as designated in the Contract Drawings. If no cover or grade is designated on the Drawings, the minimum cover to the established grade shall be five and one-half (5%) feet. Grades shall be established by the Engineer, but shall be transferred to the pipe line by the Contractor.

Pipe and fittings shall be laid on good foundations, trimmed to shape, and, where required, secured against settlement in a manner approved by the Engineer. At joints, enough depth and width shall be provided to permit the caulkers to reach entirely around the pipe, so that the joints may be made in a proper manner. Pipes shall have a solid bearing throughout their entire length. When laid in tunnel, the pipe shall be blocked in such a manner as to take the weight off the bells.

Note: -6" x 12" Tapping Tee & Valve to be used.

Hydrants with ValvesAAttabhed-Bhobmington Indiana. Standard-to be used.

In joining the pipe and fittings the spigot of each pipe shall be properly seated in the bell of the next adjacent piece and adjusted so as to give a uniform space for the joint, which shall be made with braided hemp or jute, rubber or fibre gasket and lead or compound, as designated in the Project Specifications. The packing shall be long enough to completely encircle the pipe and shall be thoroughly driven into the bell so as to leave a space of at least two and one-half (2½) inches in depth to be filled with lead or compound. Each joint must be made in one pour. In making lead joints, the melting pot shall be kept near the joint to be poured and dross shall not be allowed to accumulate in the melting pot. Lead joints shall be thoroughly caulked by competent mechanics, and in such a manner as shall secure tight joints without overstraining theiron of the bells.

Compound joints shall be made in strict conformance with the manufacturer's recommendations and directions.

Mechanical joint pipe shall be jointed in accordance with the manufacturer's recommendations, and bolts shall be tightened with approved torque wrench or other approved means to secure uniform and allowable tension of the bolts.

All bends, 22-% degrees or greater, tees, crosses, plugs, etc., shall be backed up and anchored with concrete, so that there will be no movement of the pipe in the joints due to internal or external pressures. The concrete shall be placed around the fittings, and completely fill the space between the fittings and the walls of the trench, from 6 inchesbelow the fitting or pipe to 12 inches above the fitting. The anchor concrete shall be so placed that bell and spigot joints may be recaulked, if necessary.

Concrete shall be volume proportioned on the basis of one (1) part Portland cement, three (3) parts of fine aggregate, and five (5) parts of coarse aggregate, with only enough water added to make a workable mix. Portland cement shall conform to A.S.T.M. Specification, Serial Designation: C150-53, Type I.

Water shall be clean and shall be free from oil, acid, injurious amounts of vegetable matter, alkalies or other salts. Fine aggregate shall consist of well-graded sand, having clean, hard, durable, uncoated grains free from deleterious substances. Coarse aggregate shall consist of well-graded crushed stone, or gravel, having clean, hard, durable, uncoated particles free from deleterious matter with a maximum size of 1½ inches. All aggregate shall be obtained from a source known to be in current and satisfactory use on concrete construction. Concrete shall be machine mixed and placed in a manner approved by the Engineer.

TESTING IN THE FIELD When a stretch of pipe and appurtenances have been completed, and before it is covered, the Contractor shall furnish proper appliances and facilities for testing and draining the same, without injury to the work or surrounding territory. He shall test by filling the pipe with clean water under a minimum hydrostatic pressure of one hundred (100) pounds per square inch for Class 150 or higher pipe and specials, and seventy-five (75) pounds per square inch for Class 100 pipe and specials. In no case shall there be any visible leakage, or shall any leakage in any stretch of pipe exceed one hundred (100) gallons per 24 hour day per inch diameter per jile, as measured over a period of two (2) hours in a manner approved by the Engineer. The above allowable leakage is for 12 foot lengths of pipe. If 18 foot lengths of pipe are sused, the allowable leakage shall be reduced in the ratio of 12 feet to the length of pipe actually used. Water for making tests shall be furnished by the Contractor at his expense.

Any defects, cracks, or leakage that may develop, or that may be distincted either in the joints or in the body of the castings, shall be promptly made good by the Contractor, at his own expense, and to the satisfaction of the Engineer.

Backfilling around joints shall not be made until the leakage tests have been made and any leaks that are discovered shall be repaired and eliminated to the satisfaction of the Engineer.

Upon written permission of the Engineer, systems composed ontirely of mechanical joints may be backfilled prior to testing, it being understood that the Contractor assumes the risk of re-excavating to the pipe in the event the system fails to meet the requirements of the pressure test.

Depending on traffic conditions, public hazard, or other reasons, the Engineer may direct when tests of completed sections of mains shall be made, and he may order such tests to be made in relatively short sections in order that hazardous sections may be backfilled promptly.

PIPE JOINTS In all jointing operations, the trench must be dewatered when joints are made and kept dewatered until sufficient time has elapsed to assure efficient hardening of the jointing material. Bell and spigots, or tongue and groove ends of the pipe shall first be wiped clean before actual jointing operations are started. The type of joint to be installed in each location of the several following types specified shall be as specifically designated in the Project Specifications.

RUBBER GASKET JOINTS On tongue and groove type of pipe joints rubber gaskets may be used. The gaskets shall consist of a special rubber ring of a size to fit snugly over the tongue of each size of pipe. The gasket shall be circular, elliptical, or of the manufacturer's special design cross section fabricated out of a special composition or rubber specifically designed to resist the hardening action of the sulphur compounds in sewage, and to prevent disintegration from sewage or water over long periods.

A ring shall be fitted over the tongue of each pipe to be laid at its outer end. The tongue shall be inserted into the groove of the pipe previously laid and the pipe pulled home. The joint shall then be pointed up from the inside and outside and troweled smooth with cement mortar or an asphalt paste filler of the type approved in the current specifications of the Corps of Engineers, U. S. Army, and as approved by the Engineer.

Bituminous and rubber gasket jointing material and joints shall be made up in strict conformance with the manufacturer's recommendations and directions.

If the type of rubber joint material furnished requires an application of rubber cement, bituminous, or other coating to insure a water-tight joint, this coating material shall be furnished and applied.

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Type of joint and jointing materials, proposed to be used by the Contractor, together with reference on similar installation, shall be submitted to the Engineer for approval. No sewer shall be laid or installed until approval of the joint and jointing materials has been received from the Engineer.

CONNECTIONS The junction of two or more sewers shall be made in strict conformance with the Contract Drawings. The cost of all connections shall be included in the contract price for the new sewers, unless otherwise specifically provided in the contract.

New sewer connections with old existing sewers shall be made within a manhole. Where an old manhole exists, at the point of connection of new and old sewers, it shall be repointed and any loose bricks or blocks in the walls of the old existing manhole shall be relaid. The cost of such work shall be included in the contract price for new main sewer, unless other payments are specifically provided for in the Project Specifications.

Where no old manhole exists at the point of connection, a new manhole shall be constructed of the size and type shown on the Contract Drawings. Payment for such additional manholes will be made at theunit price in the contract for new manholes, which price shall include all work necessary to make the connection.

Connections of new sewers to existing sewers when encountered in construction and not shown on the Contract Drawings, shall be made where ordered by the Engineer. Such connections shall be made within a manhole, except for house sewer and drain connections. When such sewer connections are made within an existing manhole, any added work involved will be paid for in accordance with the procedure outlined in the General Conditions of the Contract. If the Engineer orders such connections be made in a new manhole, such new manhole will be paid for at the prices established in the contract, which price shall include all work necessary to make the connection.

When connections are made with sewers carrying sewage or water, special care must be taken that no part of the work is built under water; a flume or dam must be installed, and pumping maintained if necessary to keep the new work in the dry until completed and concrete or mortar has set up.

The plans indicate the approximate location of house sewer and/or drain connection openings to be provided in the main sewers. The exact location shall be as directed by the Engineer during construction.

Unless otherwise shown on the Contract Drawings, or so designated in the Project Specifications, all sewer connection openings on bell and spigot pipe shall be "Y" branches, with the spur set on the barrel of the pipe at an angle of either 60 degrees or 45 degrees, with an outlet six inches in diameter.

BACKFILLING The Contractershall not backfill sewers above the top of the pipe until the sewer elevations, gradient, alignment, and the pipe joints have been checked, inspected, and approved by the Engineer. OR INSPECTOR.

Unless otherwise directed, all trenches and excavations shall be back-filled as soon as joints have acquired a suitable degree of hardness and the work shall be prosecuted expeditiously after it has been commenced.

All pipe sewers as soon as laid shall have the space between the pipe and the bottom and sides of the trench packed full with sand or selected material by hand and thoroughly tamped with a shovel, hoe, or light tamper, as fast as placed, up to the level of the top of the pipe. The filling shall be carried up evenly on both sides. Care shall be taken that no rock, frozen material, or other hard substances are placed in contact with the pipe. In areas where clean, fine and dry sand is used for backfill to top of pipe, tamping will not be required.

The pipe shall then be covered by hand to a depth of at least inches with clean, dry earth. The material shall be placed in layers not exceeding four (4) inches in depth, and each layer thoroughly tamped and compacted, with at least one man tamping for each man depositing material in the trench. (See dtail sheet)

No heavy rock shall be dropped into the trench nor placed within three (3) feet of the sewer pipe. In depositing rock in the sewer trench, care must be taken that the rock does not injure the structure. All spaces between pieces of rock shall be filled with earth to insure there being no voids.

On that part of the sewer that is constructed under unpaved areas in the streets, alleys, driveways, parking areas or other ornamental grounds, the backfilling shall be compacted with a mechanical tamper at 12 inch intervals stora pointes higher above the original elevation of the topy of the iditches of the distant

All surplus excavated material which is not used in backfilling shall be loaded and disposed of by the Contractor at his own expense.

Any settlement of the backfill below the original ground surface shall be remedied by the Contractor for a poriod of one year after final completion and acceptance upon receipt of written notice from the Owner.

RESTORATION OF SURFACE OF PAVED STREETS The pavement shall be relaid carefully and thoroughly to the section and of the materials specified. If not specified, then the replacement shall be to the section and of the materials originally placed, and to the satisfaction of the Engineer and to any others named in the Project Specifications.

When the work is completed, all surplus material, earth, rubbish, etc., shall be removed and that portion of the surface of each street disturbed by construction under this contract shall be left in as good condition as it was before the commencement of the work, and it shall be promptly and regularly maintained in such condition during a period of one (1) year after the acceptance of the work. This work of maintenance shall apply only to items of materials and workmanship improperly installed in the first instance, and maintenance measures made necessary by the ordinary wear and their occasioned by traffic shall not be at the expense of the Contractor. However, any repairs required because of unsatisfactory trench backfilling shall be at the expense of the Contractor. No payment shall be made for the restoration of the surface of paved streets, sidewalks, and driveways unless unit prices for same are set up in the proposal form, in which case only payment for pavements, driveway and sidewalk replacement will be made in accordance with the contract unit price for the particular type of item removed and replaced, if included in the contract; otherwise, the cost shall be merged in the contract unit price for sewer of the size specified.

RESPONSIBILITY The Contractor will be held strictly responsible that all parts of the work shall bear the load of the backfill. If cracks one-hundredth (1/100) of an inch develop in the pipe within one (1) year from the date of final acceptance of the work, the Contractor will be required to replace at his expense all such cracked pipe. To this end, the Contractor is advised to purchase pipe under a guarantee from the manufacturer, guaranteeing proper service of sewer pipe under conditions established by the plans, specifications, and local conditions at the site of the work.

TESTS It shall be the intention of these specifications to secure a sewer system with a minimum amount of infiltration. Maximum allowable infiltration shall be 200 gallons per mile per inch of diameter of sewer per 24 hours' day at any time. The joints shall be tight and visible leakage in the joints or leakage in excess of that specified above, shall be repaired at the Contractor's expense by any means found to be necessary.

SEWER PIFE All sewer pipe to be installed on this Project, designated in Project Specifications to be Standard Strength Clay Sewer Pipe, shall be furnished in compliance with the following specifications.

Standard Strength Clay Sever Pipe shall conform to the latest standard specifications of the American Society for Testing Naterials for Clay Sever Pipe. The following tabulation gives the listing of the dimensions and physical test requirements established in these specifications.

Internal :	Thickness of Barro	Average Crushi  Pounds per Lin	
•		Three Edge Bearing Method	Sand Bearing s Method
6	5/6	1000	1430
8	3/4	1000	1430

Pipe shall bear the initials or name of the person, company or corporation by whom they are manufactured, and the location of the factory.

INSPECTION All pipes shall be subject to inspection at the factory or point of delivery by an independent Testing Laboratory or the Engineer, and at the trench or other points of delivery by the Engineer. The purpose of this inspection by the Engineer at the trench will be to cull and reject pipes which fail to comply with the requirements of this Project.

All rejected pipes shall be plainly marked by the Engineer and shall be replaced by the Contractor with pipes which meet the requirements of the contract specifications, without additional cost to the Owner.

#### SPECIFICATIONS FOR MACADAM ROAD BASES

#### 1ST. COURSE

Place #2 crushed stone to a depth of (3) inches and to a width of twenty-six (26) feet and roll with a ten (10) ton roller, until thoroughly compacted.

2ND COURSE Of 26 feet and roll with a ten (19) ton roller, until thoroughly compacted.

On top of the above described application, place #63 crushed stone to a depth of three (3) inches, and to a width of twenty-six (26) feet and roll with a ten (10) ton roller until thoroughly compacted and until road surface has the proper contour in regard to the crown for said surface as shown on the cross section sheet of the construction plans for Park Ridge Addition.

#### SPECIFICATIONS FOR ASPHALT PAVING

Prime #63 crushed stone surface with 5/10 gallon of MC-O per square yard and let penetrate for 48 hours under traffic if sections can not be barricaded. On this prime shoot RC-3 at the rate of 5/10 gallon and apply immediately 25 pounds of #11 crushed stone per square yard. Follow this application with a wire drag broom in order to remove all ridges or spots that might not be uniformly covered with chip spreader and then roll thoroughly. For the second and final lift, shoot RC-3 at the rate of 4/10 gallon to 45/100 gallon per square yard and again cover with #11 crushed stone at the rate of 18 pounds per square yard. This application should not be dragged with broom but rolled thoroughly until smooth and firm.

Turn traffic on the surface when the job is complete as good wheel traffic is a benefit to an oil mat surface.

#### GENERAL SPECIFICATIONS

## FOR SANITARY SEWERS

GENERAL All labor, materials, equipment, tools and services rendered and required for the furnishing and installation of all sewers required on this Project shall be furnished and installed in compliance with the following specifications.

All sewers shall be installed in the sizes and to the lines and grades shown on the Contract Drawings. The type and specifications of pipe to be furnished and installed in each location shall be as designated in the Project Specifications.

All excavations, maintenance of excavations, preparation of foundations, and placing of backfill and embankment on sewer construction shall be carried out in compliance with the General Specifications and Plans.

All sewers and appurtenances of whatever type or description shall be constructed in an approved manner to the complete satisfaction of the Engineer, and Owner, and to provide a satisfactory operating improvement.

All sower pipe or other material rejected by the Owner as being not in conformance with the requirements of the Contract shall be removed from the site of the work by the Contractor as soon as it is rejected, and replaced by material which does comply. Any rejected material not so removed may be broken or rendered impossible for use by the Owner, and no additional compensation will be allowed the Contractor for such rejected material so broken or destroyed.

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EXCAVATION The ground shall be excavated in open trenches, of sufficient width and depth to provide sufficient room within the limits of the excavation or lines of sheeting and bracing, for the proper construction of the sewer and its appurtenances, as shown on the Contract Drawings.

The excavation of the trench shall not advance more than 200 feet ahead of the completed masonry and pipe work, except where, in the opinion of the Engineer, it is necessary to drain wet ground.

When trench excavation is carried ahead of contemplated masonry and pipe work, the elevation of the bettom of the trench shall be continually checked, to the satisfaction of the Owner. Excavation made below that necessary for the proper installation of the sewers, masonry, and appurtenances, shall be refilled only with sand or fine gravel, or properly graded gushed rock, thoroughly compacted, all at the Contractor's expense.

In clay excavation the bottom of excavation shall have as closely as possible the shape and dimensions of the outside of the lower one-quarter of the sewer. In sand and gravel excavation, the bottom of excavation shall be slightly rounded to provide as much bearing as possible for lower quarter of the sewer.

If the character of the ground mot with in excavating be such that the external form of the sewer cannot be preserved, the excavation shall be made to conform as nearly as possible to the external shape and outside dimensions of the sewer, and the space between the external sewer surfaces, the trench bottom, and the sides of the excavation as made, shall be filled by the Contractor with #11 stone.

Bell holes of sufficient depth to insure an even bearing on the main body of the pipe and to provide sufficient room for the making of the joint shall be dug in the bottom of the trench whenever bell and spigot pipe are being laid.

Rock excavation, if encountered, shall be removed to not less than 6 inches below the bottom of the sewer or masonry work. Irregularities of the rock, and the cut, below grade, shall be refilled with #11 stone well rammed into place, and firmly compacted; the cost of furnishing and placing such stone refill to be merged in the unit contract price for Rock Excavation.

SHEETING AND ERACING Sheeting and bracing shall be placed in the ditch, as may be necessary for the safety of the work and public, for the protection of the workmen, adjacent properties, and for the proper installation of the work.

Sheeting and/or bracing shall be progressively removed as the backfill is placed in such a manner as to prevent the caving in of the sides of the trench or excavation, and to prevent damage to the work.

Sheeting which is placed for the protection of the public, adjacent properties, or structures, shall not be removed until the backfill has been placed and thoroughly tamped. While being drawn all vacancies left by this sheeting shall be carefully filled with sand free from silt, rammed into place, puddled or otherwise firmly compacted.

After the trench has been opened to grade, it will be examined by the Engineer who will determine whether or not it is satisfactory for pipe laying.

LINES AND GRADES The Engineer will provide the Contractor initially with line and grade stakes set on the natural ground surface as defined in Section E, General Conditions of the Contract. It shall be the Contractor's responsibility to transfer the line and grade to the bottom of the ditch. Three batter boards, a top line and grade pole, shall be used for this purpose unlwar about of checking the inner lower grade and line is approved by the Engineer in writing. The Contractor must test the ditch or grade of the top line and sewer, and will be held responsible for the correct flow of sowers. In every case, the Contractor must install on the batter lines an accurate line level to test the downward grade of the pipe in the direction of flow. No claim for extra work will be allowed for alleged inaccuracy of grade stakes.

It shall be the Contractor's responsibility to protect the original line and grade stakes set by the Engineer. Should the stakes become destroyed or damaged, the cost of their replacement will be at the Contractor's expense.

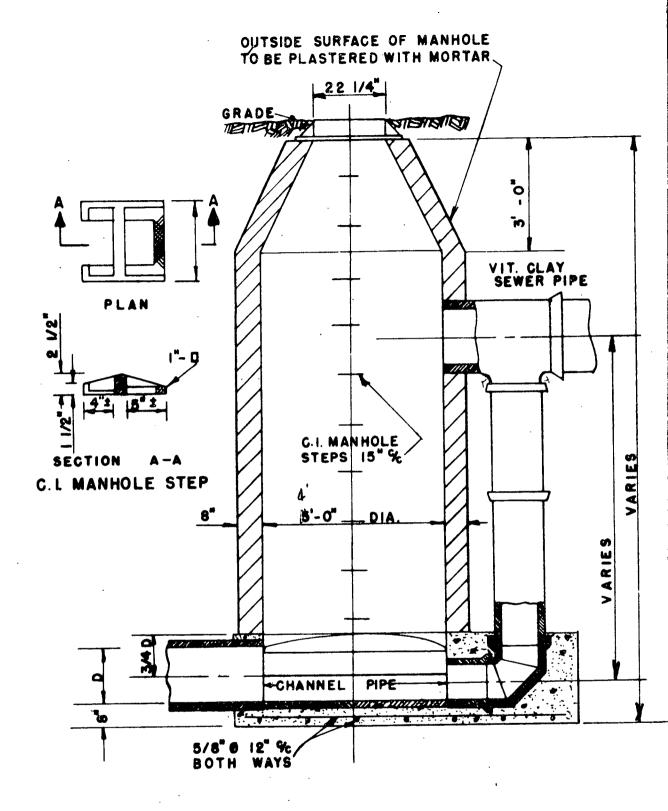
The Contractor shall provide and maintain on the work at all times a gauge rod of sufficient length of reach from the invert of the sewer pipe being laid to the top line strung on the 3 batter boards. The gauge rod shall be graduated and numbered each foot of its entire length. The gauge rod shall be equipped with either a plumb line or two spirit levels and the utmost care used to insure a truly vertical gauge rod at the time the reading is taken and pipe being set.

PIPE LAYING Each pipe shall be laid on an even, firm bed, so that no uneven strain will come to any part of the pipe. Particular care shall be exercised to prevent the pipes bearing on the sockets. Bell holes for bell and spigot pipe shall be dug at each point as hereinbefore specified. Each pipe shall be laid in conformity with the line and grade stakes given by the Engineer, and in the presence of the Inspector. The bell-end of the pipe shall be laid up-grade.

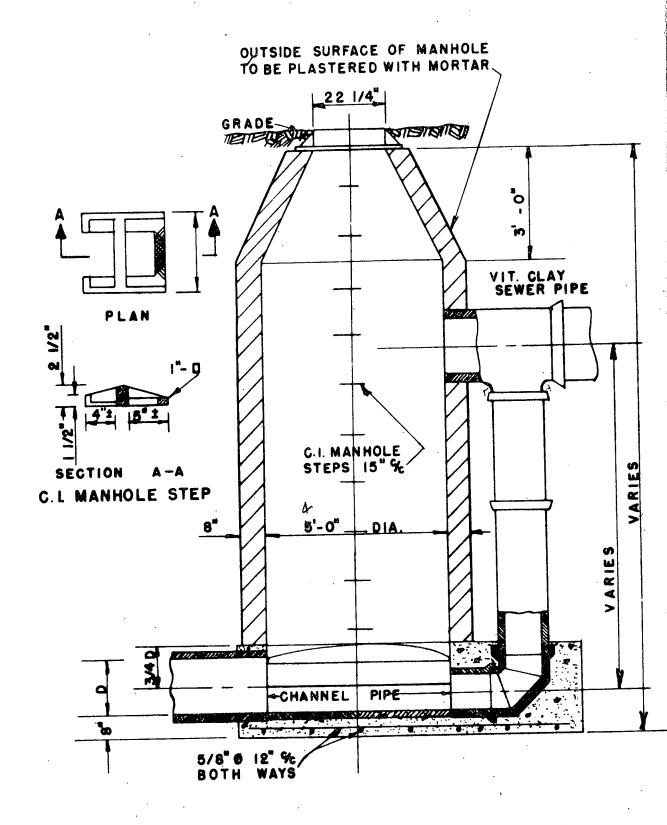
The interior of the sewer shall, as the work progresses, be cleaned of all dirt, jointing material and superfluous materials of every description. On small pipe sewers where cleaning after laying may be difficult, a swab or drag shall be kept inside the pipe line and pulled forward past each joint immediately after its completion.

All pipe shall be completely shoved home. On pipe of the tongue and groove type, 30" in diameter and larger, pressure must be applied to the cemter of each pipe as it is laid by a winch and cable or other mechanical means properly set and operated to insure that the spigot is all the way home in the socket, and that the sewer joint is of uniform size throughout the circumference of the pipe.

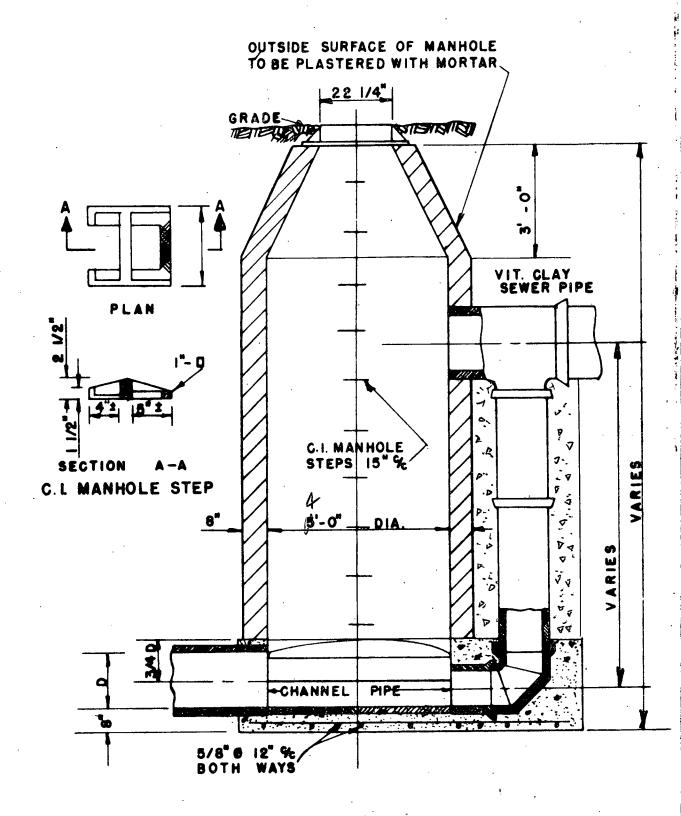
Majorjelle	America no	Benford deel + Foundry		
Brusnmells Creek 1 Weldell no hic	Grain Redge no hid	Brummette Creek 35,531,00	Stranje. Kinge. 28, 965.55	
Bros. 2 J. T. Force. 28, 244.00	76, 365,00	36, 950.00	28, 281.0	
3 Willes no bed Answhered 4 g. N. allen no bed	no kin	27,997.60	24. 331.00 21, 166.00	
5 ges. K. Harvey 18, 000.00	17,600.00	18, 900.00	25,100.00	
6 H.R. 36, 418.50 Henrican 7 Winslaw did no	22,050,25 e hed	no hed		
8 Taytor+ I day lale Nahler	·			
9. J. T. Welson 19, 933. 40	19, 946.60	no hed	_no hed	
	;			
		-	/	



TYPICAL DROP MANHOLE



TYPICAL DROP MANHOLE



TYPICAL DROP MANHOLE

July 1, 1963

# ESTIMATE

# PROJECT #1

- 1. Concrete Class F
- 2. Reinforcing Steel
- 3. Prestressed Deck Furnished & Placed
- 4. Guard Rail, Complete
- 5. Removal of old structure

QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
53.5	C.U.Y.D.	80.00	428000
5800	#	0.14	- 312,00
1	L.S.		12700,00
140	L.F.	4.50 -	63000
1	L.S.	7606 -	- 2000,00

TOTAL PROJECT #1 \$ 20,422.00

# PROJECT #2

- 1. Concrete Class F
- 2. Reinforcing Steel
- 3. Prestressed Beams Furnished & Erected
- 4. Guard Rail, Complete
- 5. 12BP53 Steel Piles Furnished & Driven
- 6. Removal of old structure

QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
148.2	C.U.Y.D.	80.00 -	11856.00
16220	#	0.14 -	2270.00
1	L.S.		7400,00
164	L.F.	4.50 -	738,00
400	L.F.	7.00 -	2800,00
1	L.S.	(000 -	(000.00

TOTAL PROJECT #2 \$ 26,064.80

TOTAL 2 PROJECTS \$ 46,486.80

Signature: ESTIMATE

Report No. 26-63

SPLIT

## REPORT OF TESTS OF CONCRETE CYLINDERS

	•				
CONTRACTOR ME	S Builders		<del></del>	•	
PROJECT Brid	ge on That	Road			
LOCATION OF POUR Top	of Wing Wa	lls			
<u>IN</u>	FORMATION FUL	RNISHED FROM	FIELD		
DATE CYLINDER MADE12	-5-63				_
SAMPLE MARKED	26-63 A	26-63 B			]
SPECIFIED STRENGTH					]
TYPE OF MIX	Class F				
MATERIAL USED:		WEIGHTS PER	l .		Cal Villa
CEMENT	CONTENT	ВАТСН <b>658</b>	Lehigh F	BRAND) <b>Ortland Ceme</b>	nt FALL
FINE AGGREGATE				Co Gravel Co.	
COARSE AGGREGATE				rushed Stone	
WATER				ER YARD	CONE
ADMIXTURE		t.			1.2.00
	5,,			E 01	20//0
SLUMP OBTAINED IN INS		AIR CONTE	NT	5 %	6/10
CONCRETE FURNISHED BY					-//:
SAMPLED FROM TRUCK NO	27 °c	TIME SAMP	LED	<b>70</b> °F	
WEATHER AND TEMP	Contractor	_ IEMP. OF INFORMAT!	CONCRETE _	D)	2
SAMPLE NUMBER	Contractor	INFORMATI	. DI		CONE SHEA
CYLINDER RECEIVED	12-6-63	12-6-63	[		N ONE
WEIGHT OF CYLINDER	1 0 00	1- 5 00			عُ يُهُا الْمَا
CYLINDER CURED IN FIELD	Lab	Lab			
TYPE OF BREAK	#2	#2			3
TOTAL LOAD IN LBS.	92000	100000			SHEAR
UNIT LOAD IN PSI	3257	3540			
DATE CYLINDER MADE	12-5-63	12-5-63			المالية
DATE CYLINDER TESTED	12-6-62	12-6-63			4 50 IT

REMARKS:

AGE WHEN CYL. TESTED \_\_

# ROGERS BUILDING SUPPLIES, INC.

Report No. 16-63

# REPORT OF TESTS OF CONCRETE CYLINDERS

CONTRACTOR	M & S Con	astruction	Co.	
PROJECT	That Bri	dge	······································	
LOCATION OF POUR	Footers		·	
<u>IN</u>	FORMATION FUL	RNISHED FROM	<u>FIELD</u>	
DATE CYLINDER MADE	10-24-63			
SAMPLE MARKED	16-63 A	16-63 B		
SPECIFIED STRENGTH	Class F			
TYPE OF MIX	9B	<u> </u>		
MATERIAL USED:	MO I STURE CONTENT	WEIGHTS PER BATCH .	SOURCE OF M (BRAND	· •
CEMENT	<u> </u>	,		
FINE AGGREGATE				<del></del>
COARSE AGGREGATE	CALCOR	D SACK	GALS.PER Y	A P D
ADMIXTURE		t.		
SLUMP OBTAINED IN INS. 4" AIR CONTENT CONCRETE FURNISHED BY Ready Mix #2				5 %
SAMPLED FROM TRUCK NO		TIME_SAMPL	.ED	
WEATHER AND TEMP.	1 70 ° <sub>F</sub>	_ TEMP. OF C	ONCRETE	70 °F
CYLINDERS MADE BY	T.P.	INFORMATIO	N BY T.P.	
SAMPLE NUMBER				
CYLINDER RECEIVED	10-24-63			
WEIGHT OF CYLINDER	28.65	28,75		
LAB CYLINDER CURED IN FIELD	Lab	Lab	.	
TYPE OF BREAK	#2	#2		
TOTAL LOAD IN LBS.	93000	137000		
UNIT LOAD IN PSI	3292	4850		
DATE CYLINDER MADE	10-24-63	10-24-63	, i	
DATE CYLINDER TESTED	10-31-63	12-9-63		
AGE WHEN CYL. TESTED	7 DAYS	46 DAYS	DAYS	DAYS

REMARKS:



CONE



E SHEAF



4 SPLIT

Report No. 25-63

# REPORT OF TESTS OF CONCRETE CYLINDERS

SAMPLE NUMBER         CYLINDER RECEIVED       11-1-63         WEIGHT OF CYLINDER       LAB         CYLINDER CURED IN FIELD       Lab         TYPE OF BREAK       #2         #2       #2         SHEA         TOTAL LOAD IN LBS.       135000         UNIT LOAD IN PSI       4779         DATE CYLINDER MADE       10-30-63         12-9-63       12-9-63	CONTRACTOR	M &	S Builders					
INFORMATION FURNISHED FROM FIELD  DATE CYLINDER MADE 10-30-63  SAMPLE MARKED 25-63 25-63  SPECIFIED STRENGTH TYPE OF MIX Class F  MATERIAL USED: MOISTURE WEIGHTS PER SOURCE OF MATERIAL (BRAND)  CEMENT 658 Lehigh Portland Cement (BRAND)  COMENT 658 Lehigh Portland Cement (BRAND)  COARSE AGGREGATE 1219 Morgan Co Sand & Gravel  COARSE AGGREGATE 1876 Blgtn. Crushed Stone  WATER GALS. PER SACK 6 GALS.PER YARD CONCRETE FURNISHED BY Ready Mix #2  SAMPLED FROM TRUCK NO. TIME SAMPLED TIME SAMPLED TO CYLINDERS MADE BY CONTRACTOR INFORMATION BY T.P.  CYLINDER RECEIVED 11-1-63  WEIGHT OF CYLINDER CYLINDER #2 #2 #2 #2 #2 #2 #2 #2 #2 #2 #2 #2 #2	PROJECTBridge on That Road							
DATE CYLINDER MADE   10-30-63    SAMPLE MARKED   25-63   25-63    SPECIFIED STRENGTH   TYPE OF MIX   Class F    MATERIAL USED:   MOISTURE   WEIGHTS PER   SOURCE OF MATERIAL    CEMENT   656	LOCATION OF POUR Cast Abutment & West Footing						<del></del>	
SAMPLE MARKED  SPECIFIED STRENGTH  TYPE OF MIX  MATERIAL USED:  CEMENT  FINE AGGREGATE  COARSE AGGREGATE  WATER  WATER  ADMIXTURE  SLUMP OBTAINED IN INS.  CONCRETE FURNISHED BY SAMPLED FROM TRUCK NO.  CYLINDERS MADE BY  CYLINDER RECEIVED  LAB  CYLINDER CURED IN FIELD  LAB  CYLINDER CURED IN FIELD  LAB  CYLINDER CURED IN LAB  CYLINDER MADE  TYPE OF BREAK  #2  #2  #2  3  SHEA  TOTAL LOAD IN PSI  ATTO 10-30-63  10-30-63  12-9-63  12-9-63  12-9-63  12-9-63  SOURCE OF MATERIAL  (PRAND)  (P	<u>IN</u>	FORMATION FUL	RNISHED FROM	FIELD				
TYPE OF MIX Class F  MATERIAL USED:		25-63	25-63					
CEMENT FINE AGGREGATE FINE AGGREGATE COARSE AGGREGATE COARSE AGGREGATE ADMIXTURE A E Agent  SLUMP OBTAINED IN INS. S" AIR CONTENT A E Agent  SLUMP OBTAINED IN INS. S" AIR CONTENT A E Agent  SAMPLED  WEATHER AND TEMP. CYLINDERS MADE BY CYLINDER RECEIVED CYLINDER CURED IN FIELD  LAB CYLINDER CURED IN FIELD  LAB CYLINDER CURED IN FIELD  LAB CYLINDER CURED IN PSI DATE CYLINDER MADE  DATE CYLINDER TESTED  LONTENT  BATCH (BRAND) (CONE BAIL  COME SH  CONE  CONE  TIME SAMPLED TEMP. OF CONCRETE TO OF TEMP. OF TO OF TEMP.  CONE SH  C		Class F					<b>₹</b>	
COARSE AGGREGATE  WATER  GALS. PER SACK  GALS. PER YARD  A E Agent  SLUMP OBTAINED IN INS.  S" AIR CONTENT  CONCRETE FURNISHED BY  Ready Mix #2  SAMPLED FROM TRUCK NO.  WEATHER AND TEMP.  CYLINDERS MADE BY  CYLINDER RECEIVED  TIME SAMPLED  TOTAL LOAD IN LBS.  135000  147000  LAB  TYPE OF BREAK  TOTAL LOAD IN PSI  DATE CYLINDER MADE  DATE CYLINDER MADE  L2-9-63  12-9-63  1876  Blgtn. Crushed Stone  GALS. PER YARD  A F Agent  COM  GALS. PER YARD  A F AGRIC  GONA  A E Agent  TON  TON  THE SAMPLED  TIME SAMPLED  TEMP. OF CONCRETE  TON  TON  TON  TON  TON  TON  TON			<b>658</b>	Lehigh :	(BRAND) <b>Portlan</b>	d Cement		
WATER ADMIXTURE A E Agent  SLUMP OBTAINED IN INS. 5" AIR CONTENT 4 %  CONCRETE FURNISHED BY Ready Mix #2  SAMPLED FROM TRUCK NO. TIME SAMPLED 70 °F  CYLINDERS MADE BY CONTRACTOR INFORMATION BY T.P.  CYLINDER RECEIVED 11-1-63  WEIGHT OF CYLINDER #2 #2 #2  TOTAL LOAD IN LBS. 135000 147000  UNIT LOAD IN PSI 4779 5204  DATE CYLINDER MADE 12-9-63 12-9-63  DATE CYLINDER TESTED 12-9-63 12-9-63		ļ		Morgan	Co Sand	& Gravel		
ADMIXTURE A E Agent  SLUMP OBTAINED IN INS. 5" AIR CONTENT 4 %  CONCRETE FURNISHED BY Ready Mix #2  SAMPLED FROM TRUCK NO. TIME SAMPLED TEMP. OF CONCRETE 70 °F  CYLINDERS MADE BY CONTRACTOR INFORMATION BY T.P.  SAMPLE NUMBER CYLINDER RECEIVED 11-1-63  WEIGHT OF CYLINDER LAB  CYLINDER CURED IN FIELD Lab Lab  TYPE OF BREAK #2 #2  TOTAL LOAD IN LBS. 135000 147000  UNIT LOAD IN PSI 4779 5204  DATE CYLINDER MADE 10-30-63 12-9-63  DATE CYLINDER TESTED 12-9-63 12-9-63			10/0	Blgtn.	Crushed	Stone	1	
SLUMP OBTAINED IN INS. 5" AIR CONTENT 4 %  CONCRETE FURNISHED BY Ready Mix #2  SAMPLED FROM TRUCK NO. TIME SAMPLED TEMP. OF CONCRETE 70 °F  CYLINDERS MADE BY CONTRACTOR INFORMATION BY T.P.  SAMPLE NUMBER CYLINDER LAB CYLINDER CURED IN FIELD Lab Lab  TYPE OF BREAK #2 #2  TOTAL LOAD IN LBS. 135000 147000  UNIT LOAD IN PSI 4779 5204  DATE CYLINDER MADE 10-30-63 10-30-63  DATE CYLINDER TESTED 12-9-63 12-9-63								
CYLINDERS MADE BY CONTRACTOR INFORMATION BY T.P.  SAMPLE NUMBER  CYLINDER RECEIVED 11-1-63  WEIGHT OF CYLINDER  LAB  CYLINDER CURED IN FIELD Lab  TYPE OF BREAK #2 #2  TOTAL LOAD IN LBS. 135000 147000  UNIT LOAD IN PSI 4779 5204  DATE CYLINDER MADE 10-30-63 10-30-63  DATE CYLINDER TESTED 12-9-63 12-9-63	SLUMP OBTAINED IN INS. 5" AIR CONTENT 4 %  CONCRETE FURNISHED BY Ready Mix #2							
CYLINDERS MADE BY CONTRACTOR INFORMATION BY T.P.  SAMPLE NUMBER  CYLINDER RECEIVED 11-1-63  WEIGHT OF CYLINDER  LAB  CYLINDER CURED IN FIELD Lab  TYPE OF BREAK #2 #2  TOTAL LOAD IN LBS. 135000 147000  UNIT LOAD IN PSI 4779 5204  DATE CYLINDER MADE 10-30-63 10-30-63  DATE CYLINDER TESTED 12-9-63 12-9-63		65 0-	TIME SAMP	LED		70 0-	<b>#</b>	
CYLINDER RECEIVED       11-1-63         WEIGHT OF CYLINDER       LAB         CYLINDER CURED IN FIELD       Lab         TYPE OF BREAK       #2         TOTAL LOAD IN LBS.       135000         UNIT LOAD IN PSI       4779         DATE CYLINDER MADE       10-30-63         12-9-63       12-9-63	CYLINDERS MADE BY	Contractor	_ TEMP. OF INFORMATI	ON BY	T.P.		2 COME SHEA	
WEIGHT OF CYLINDER         LAB       Lab       Lab         TYPE OF BREAK       #2       #2         TOTAL LOAD IN LBS.       135000       147000         UNIT LOAD IN PSI       4779       5204         DATE CYLINDER MADE       10-30-63       10-30-63         DATE CYLINDER TESTED       12-9-63       12-9-63		11-1-63		1			1001E 311E	
CYLINDER CURED IN FIELD         Lab         Lab           TYPE OF BREAK         #2         #2           TOTAL LOAD IN LBS.         135000         147000           UNIT LOAD IN PSI         4779         5204           DATE CYLINDER MADE         10-30-63         10-30-63           DATE CYLINDER TESTED         12-9-63         12-9-63							1000	
TOTAL LOAD IN LBS. 135000 147000  UNIT LOAD IN PSI 4779 5204  DATE CYLINDER MADE 10-30-63 10-30-63  DATE CYLINDER TESTED 12-9-63 12-9-63 \$PLIT	CYLINDER CURED IN FIELD _	Lab	Lab					
TOTAL LOAD IN LBS. 135000 147000  UNIT LOAD IN PSI 4779 5204  DATE CYLINDER MADE 10-30-63 10-30-63  DATE CYLINDER TESTED 12-9-63 12-9-63 3PLI	TYPE OF BREAK	#2	#2				3	
DATE CYLINDER MADE 10-30-63 10-30-63 12-9-63 12-9-63 12-9-63 12-9-63 5PLI	TOTAL LOAD IN LBS.	135000	147000				SHEAR	
DATE CYLINDER TESTED 12-9-63 12-9-63 SPLIT	UNIT LOAD IN PSI	4779	5204			·	4 0	
DATE CYLINDER TESTED 12-9-63 12-9-63	DATE CYLINDER MADE						161	
40	DATE CYLINDER TESTED	12-9-63	12-9-63				4 SPLIT	
	AGE WHEN CYL. TESTED	40 DAYS	40 DAYS	5 .	DAYS	DAYS		

REMARKS:

Report No. 24-63

## REPORT OF TESTS OF CONCRETE CYLINDERS

ADMIXTURE  SLUMP OBTAINED IN INS. 5" Claimed AIR CONTENT 4 1/2 %  CONCRETE FURNISHED BY  SAMPLED FROM TRUCK NO. TIME SAMPLED  WEATHER AND TEMP. 65 °F TEMP. OF CONCRETE 68 °F  CYLINDERS MADE BY  SAMPLE NUMBER  CYLINDER RECEIVED 11-18-63  WEIGHT OF CYLINDER  CYLINDER CURED IN FIELD Lab  TYPE OF BREAK #2  TOTAL LOAD IN LBS. 125000  UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63	CONTRACTOR	M & S	Builders				
DATE CYLINDER MADE 11-1-63  SAMPLE MARKED 24-63  SAMPLE MARKED 124-63  SPECIFIED STRENGTH CLASS F  MATERIAL USED: MOISTURE WEIGHTS PER SOURCE OF MATERIAL (BRAND)  CEMENT 658 Lehigh Portland Cement (BRAND)  CONTENT 658 Lehigh Portland Cement (BRAND)  COARSE AGGREGATE 1219 Morgan Co Gravel Co. To Gravel Co. To Gravel Co. To Gravel Co. Gravel Co. To Gravel Co. Gravel Co. Gravel Co. Gravel Co. Gravel Co. Gravel Co. To Gravel Co. Gravel Co. Gravel Co. Gravel Co. To Gravel Co. Gravel Co. Gravel Co. Gravel Co. To Gravel Co. Grave	PROJECTBridge on That Road						
DATE CYLINDER MADE 11-1-63  SAMPLE MARKED 24-63  SPECIFIED STRENGTH TYPE OF MIX Class F  MATERIAL USED: MOISTURE WEIGHTS PER SOURCE OF MATERIAL (BRAND)  CEMENT 658 Lehigh Portland Cement FINE AGGREGATE 1219 Morgan Co Gravel Co. COARSE AGGREGATE 1876 Blgtn. Crushed Stone WATER GALS. PER SACK GALS.PER YARD ADMIXTURE  SLUMP OBTAINED IN INS. 5" Claimed AIR CONTENT 4 1/2 %  CONCRETE FURNISHED BY SAMPLED 650 F TEMP. OF CONCRETE 680 F CYLINDERS MADE BY Contractor INFORMATION BY SAMPLE NUMBER CYLINDER RECEIVED 11-18-63  WEIGHT OF CYLINDER LAB LAB TYPE OF BREAK #2 3  CYLINDER CURED IN FIELD Lab 125000  UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63 40  AND SAMPLE NUMBER CONTENT AT A 1/2 %  COME SHOW THE SAMPLED SHOW THE	LOCATION OF POURAbutments						
SAMPLE MARKED	<u>IN</u>	FORMATION FUL	RNISHED FROM	FIELD			
SAMPLE MARKED	DATE CYLINDED MADE 11	1-1-63					
SPECIFIED STRENGTH TYPE OF MIX  MATERIAL USED:  CEMENT  CEMENT  FINE AGGREGATE  COARSE AGGREGATE  ADMIXTURE  SLUMP OBTAINED IN INS.  S" Claimed AIR CONTENT  65 ° TEMP. OF CONCRETE  CYLINDER RECEIVED  TYPE OF BREAK  TOTAL LOAD IN LBS.  DATE CYLINDER MADE  11-1-63  DATE CYLINDER MADE  COLUMN WEIGHTS PER SOURCE OF MATERIAL (BRAND)  MEATHER AND COMPAND COMPAND CONCENDENT  CONCRETA FOR MATERIAL CONTENT  A 1/2 %  CONCRETE FURNISHED BY  SAMPLED  TIME SAMPLED  TO CONCRETE  TO CONCRETE				<u> </u>	· .		
TYPE OF MIX Class F  MATERIAL USED: MOISTURE WEIGHTS PER SOURCE OF MATERIAL (BRAND) CEMENT 658 Lehigh Portland Cement FINE AGGREGATE 1219 Morgan Co Gravel Co. COARSE AGGREGATE 1876 Blgtn. Crushed Stone WATER GALS. PER SACK GALS.PER YARD COMMIXTURE  SLUMP OBTAINED IN INS. 5" Claimed AIR CONTENT 4 1/2 % CONCRETE FURNISHED BY SAMPLED FROM TRUCK NO. TIME SAMPLED FOR TRUBE SAMPLED FROM TRUCK NO. WEATHER AND TEMP. 65 °F TEMP. OF CONCRETE 68 °F CYLINDERS MADE BY CONTRACTOR INFORMATION BY SAMPLE NUMBER CYLINDER RECEIVED 11-18-63 WEIGHT OF CYLINDER RECEIVED LAB  TYPE OF BREAK #2 3  COME SH  TYPE OF BREAK #2 3  DATE CYLINDER MADE 11-1-63 WALL AND TEMP. 4425  DATE CYLINDER TESTED 12-9-63 AU  MOISTURE WEIGHTS PER SOURCE OF MATERIAL (BRAND)  MEATHER SOURCE OF MATERIAL (BRAND)  TIME SAMPLED THE SAMPLED THE SAMPLED TO SOURCE THE SAMPLED TO SOURCE TO							
CONTENT 658 Lehigh Portland Cement FINE AGGREGATE 1219 Morgan Co Gravel Co. COARSE AGGREGATE 1876 Blgtn. Crushed Stone WATER GALS. PER SACK GALS.PER YARD ADMIXTURE  SLUMP OBTAINED IN INS. 5" Claimed AIR CONTENT 4 1/2 %  CONCRETE FURNISHED BY SAMPLED FROM TRUCK NO. TIME SAMPLED WEATHER AND TEMP. 65 °F TEMP. OF CONCRETE 68 °F CYLINDERS MADE BY Contractor INFORMATION BY  SAMPLE NUMBER CYLINDER RECEIVED 11-18-63 WEIGHT OF CYLINDER  CYLINDER CURED IN FIELD Lab  TYPE OF BREAK #2  TOTAL LOAD IN LBS. 125000 UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63  A0  A0  CONTENT 6584 Lehigh Portland Cement TIME SAMPLED THE SAMPLED CONTENT AIR SAMPLED  TOTAL LOAD IN LBS. 2  A1  A2  A3  CONTENT 6584 Lehigh Portland Cement Total Content Conten		Class F				~	
CONTENT 658 Lehigh Portland Cement FINE AGGREGATE 1219 Morgan Co Gravel Co. COARSE AGGREGATE 1876 Blgtn. Crushed Stone WATER GALS. PER SACK GALS.PER YARD ADMIXTURE  SLUMP OBTAINED IN INS. 5" Claimed AIR CONTENT 4 1/2 %  CONCRETE FURNISHED BY SAMPLED FROM TRUCK NO. TIME SAMPLED WEATHER AND TEMP. 65 °F TEMP. OF CONCRETE 68 °F CYLINDERS MADE BY Contractor INFORMATION BY  SAMPLE NUMBER CYLINDER RECEIVED 11-18-63 WEIGHT OF CYLINDER  CYLINDER CURED IN FIELD Lab  TYPE OF BREAK #2  TOTAL LOAD IN LBS. 125000 UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63  A0  A0  CONTENT 6584 Lehigh Portland Cement TIME SAMPLED THE SAMPLED CONTENT AIR SAMPLED  TOTAL LOAD IN LBS. 2  A1  A2  A3  CONTENT 6584 Lehigh Portland Cement Total Content Conten		MOLOTUDE		COLUDER O	= <del>.=</del> ==		
FINE AGGREGATE 1219 Morgan Co Gravel Co. COARSE AGGREGATE 1876 Blgtn. Crushed Stone WATER GALS. PER SACK GALS.PER YARD  SLUMP OBTAINED IN INS. 5" Claimed AIR CONTENT 4 1/2 %  CONCRETE FURNISHED BY SAMPLED FROM TRUCK NO. TIME SAMPLED  WEATHER AND TEMP. 65 °E TEMP. OF CONCRETE 68 °F INFORMATION BY  SAMPLE NUMBER CYLINDER LAB CYLINDER RECEIVED 11-18-63  WEIGHT OF CYLINDER #2  TOTAL LOAD IN LBS. 125000  UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63  A 3PLI	MATERIAL USED:					Ke 100	
COARSE AGGREGATE GALS. PER SACK GALS. PER YARD  ADMIXTURE  SLUMP OBTAINED IN INS. 5" Claimed AIR CONTENT 4 1/2 %  CONCRETE FURNISHED BY SAMPLED TEMP. OF CONCRETE 68 °F  CYLINDERS MADE BY CONTRACTOR BY  CYLINDERS MADE BY CONTRACTOR BY  CYLINDER RECEIVED 11-18-63  WEIGHT OF CYLINDER  CYLINDER CURED IN FIELD Lab  TYPE OF BREAK #2  DATE CYLINDER MADE 11-1-63  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63  ABBRIA. Crushed Stone  GALS. PER SACK GALS. PER YARD COMES. THE SAMPLED COMES. THE SAMPLED AIR CONTENT AT THE SAMPLED TEMP. OF CONCRETE 68 °F  TOME SAMPLED TEMP. OF CONCRETE 68 °F  INFORMATION BY COMES. THE SAMPLED COMES. TH	CEMENT	COLVIENT		Lehigh Po	rtland Ceme	nt	
WATER ADMIXTURE  SLUMP OBTAINED IN INS. 3" Claimed AIR CONTENT 4 1/2 %  CONCRETE FURNISHED BY SAMPLED FROM TRUCK NO. TIME SAMPLED  WEATHER AND TEMP. 65 °F TEMP. OF CONCRETE 68 °F INFORMATION BY  CYLINDERS MADE BY CONTRACTOR INFORMATION BY  CYLINDER RECEIVED 11-18-63  WEIGHT OF CYLINDER  CYLINDER CURED IN FIELD Lab  TYPE OF BREAK #2  TOTAL LOAD IN LBS. 125000  UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63	FINE AGGREGATE			Morgan Co	Gravel Co.		
ADMIXTURE  SLUMP OBTAINED IN INS.  S" Claimed AIR CONTENT 4 1/2 %  CONCRETE FURNISHED BY  SAMPLED FROM TRUCK NO.  WEATHER AND TEMP.  CYLINDERS MADE BY  CYLINDER RECEIVED 11-18-63  WEIGHT OF CYLINDER  CYLINDER CURED IN FIELD Lab  TYPE OF BREAK #2  TOTAL LOAD IN LBS.  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63  AOMORPH AIR CONTENT 4 1/2 %  TIME SAMPLED 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
SLUMP OBTAINED IN INS. 3" Claimed AIR CONTENT 4 1/2 %  CONCRETE FURNISHED BY SAMPLED FROM TRUCK NO. TIME SAMPLED TEMP. OF CONCRETE 68 °F TEMP. OF CONC		GALS, PE				CONE	
CONCRETE FURNISHED BY  SAMPLED FROM TRUCK NO.  WEATHER AND TEMP.  CYLINDERS MADE BY  SAMPLE NUMBER  CYLINDER RECEIVED  LAB  CYLINDER CURED IN FIELD  TYPE OF BREAK  TOTAL LOAD IN LBS.  DATE CYLINDER MADE  DATE CYLINDER TESTED  TIME SAMPLED  TEMP. OF CONCRETE  TOTAL LOAD IN LBS.  TOTAL LOAD IN LBS.	ADMIXTURE					0 4:0	
SAMPLED FROM TRUCK NO	SLUMP OBTAINED IN INS.	5" Claime	d AIR CONTE	NT	4 1/2 %	0.//5	
WEATHER AND TEMP. 65 °F TEMP. OF CONCRETE 68 °F CYLINDERS MADE BY CONTRACTOR INFORMATION BY  SAMPLE NUMBER CYLINDER RECEIVED 11-18-63  WEIGHT OF CYLINDER LAB CYLINDER CURED IN FIELD Lab  TYPE OF BREAK #2  TOTAL LOAD IN LBS. 125000  UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63  3PLI	CONCRETE FURNISHED BY			· · · · · · · · · · · · · · · · · ·		3/0.	
SAMPLE NUMBER  CYLINDER RECEIVED  WEIGHT OF CYLINDER  CYLINDER CURED IN FIELD  LAB  TYPE OF BREAK  #2  TOTAL LOAD IN LBS.  125000  UNIT LOAD IN PSI  DATE CYLINDER MADE  11-1-63  DATE CYLINDER TESTED  12-9-63  TIFORMATION BY  CONE SH  ACCIONES HOLDER  CONE SH  ACCIONES HOLDER  ACCIONES HOLDER  ACCIONES HOLDER  CONE SH  ACCIONES HOLDER  ACCIONES HOLDER  ACCIONES HOLDER  ACCIONES HOLDER SH  ACCIONES HOLDER  CONE SH  ACCIONES HOLDER  ACCIONES HOLDE		15.0	TIME SAMP	LED			
SAMPLE NUMBER  CYLINDER RECEIVED  WEIGHT OF CYLINDER  CYLINDER CURED IN FIELD  LAB  TYPE OF BREAK  #2  TOTAL LOAD IN LBS.  125000  UNIT LOAD IN PSI  DATE CYLINDER MADE  11-1-63  DATE CYLINDER TESTED  12-9-63  TIFORMATION BY  CONE SH  ACCIONES HOLDER  CONE SH  ACCIONES HOLDER  ACCIONES HOLDER  ACCIONES HOLDER  CONE SH  ACCIONES HOLDER  ACCIONES HOLDER  ACCIONES HOLDER  ACCIONES HOLDER SH  ACCIONES HOLDER  CONE SH  ACCIONES HOLDER  ACCIONES HOLDE		Centracte	_ TEMP. OF	CONCRETE	<b>68</b>	-	
CYLINDER RECEIVED 11-18-63 WEIGHT OF CYLINDER  CYLINDER CURED IN FIELD Lab  TYPE OF BREAK #2  TOTAL LOAD IN LBS. 125000 UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63		30.01.000	- INFORMATI	ON BY		Z CONE SUE	
WEIGHT OF CYLINDER  CYLINDER CURED IN FIELD  Lab  TYPE OF BREAK  #2  TOTAL LOAD IN LBS.  125000  UNIT LOAD IN PSI  DATE CYLINDER MADE  11-1-63  DATE CYLINDER TESTED  12-9-63		11-18-63			T	COME SHE	
CYLINDER CURED IN FIELD Lab  TYPE OF BREAK #2  TOTAL LOAD IN LBS. 125000  UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63						2.30	
TYPE OF BREAK #2  TOTAL LOAD IN LBS. 125000  UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63							
TYPE OF BREAK #2  TOTAL LOAD IN LBS. 125000  UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63  40	CYLINDER CURED IN FIFE D	Lab				000	
TOTAL LOAD IN LBS. 125000  UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63  3PLI							
TOTAL LOAD IN LBS. 125000  UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63  3PLI	TYPE OF BREAK	#2	·				
UNIT LOAD IN PSI 4425  DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63  40	TOTAL LOAD IN LDG	125000		İ		SHEAR	
DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63  40	TOTAL LOAD IN LBS	123000				11/2/10	
DATE CYLINDER MADE 11-1-63  DATE CYLINDER TESTED 12-9-63  40	LINIT LOAD IN BSI	4425					
DATE CYLINDER TESTED 12-9-63 spli	ONTI EOAD IN 131		ï			ه ((هُ ((ح)	
DATE CYLINDER TESTED 12-9-63	DATE CYLINDER MADE	11-1-63				[] [] [] [] [] [] [] [] [] [] [] [] [] [	
SPLI		120 (2				4	
AGE WHEN CYL. TESTED 40 DAYS DAYS DAYS	DATE CYLINDER TESTED	12-7-03			<del> </del>	SPLIT	
AGE WHEN CIL. IESIEU PAYS DAYS DAYS DAYS DAYS	ACE WHEN CVI TECTED	40 044					
	MGE WHEN CTL. IESTED	L - DAYS	L DAYS	DAY	SI DAYS	I	

REMARKS:

¥ -1 3

Report No. 20-63

#### REPORT OF TESTS OF CONCRETE CYLINDERS

CONTRACTORC	hilds & Co	nnors			
PROJECTB	ean Blosso	m Bridge			<del></del>
LOCATION OF POURA	butments				· · · · · · · · · · · · · · · · · · ·
TNI	FORMATION FUL	אחפם הפעטווים	rtrin		
1111	OHMATION TO	INTSHED THOM	TILLD		
DATE CYLINDER MADE10-	3-63			- <u>-</u>	
SAMPLE MARKED	20-63 A	20-63 B	20-63 C		
SPECIFIED STRENGTH			<u> </u>		
TYPE OF MIX	Class F		ļ		53.50
MATERIAL LICER.	MOISTURE	WEIGHTS PER	SOURCE	OF MATERIAL	
MATERIAL USED:			Leigh Por		6 4 80
CEMENT		000			
FINE AGGREGATE	1	265 914	Morgan Co		
COARSE AGGREGATE WATER		R SACK			
ADMIXTURE		ent			
·					
SLUMP OBTAINED IN INS	5"	AIR CONTE	NT	5	%
CONCRETE FURNISHED BY	Ready Mix	#2		,	
SAMPLED FROM TRUCK NO WEATHER AND TEMP	70 ° <sub>F</sub>	TIME SAMP _ TEMP. OF	LED	70	
CYLINDERS MADE BY	Contracto	L INFORMATI	ON BY T.	P. 70	2
SAMPLE NUMBER		= THEORMATT	ON B1	· · · · · · · · · · · · · · · · · · ·	CONE SHEAR
CYLINDER RECEIVED	10-31-63				
WEIGHT OF CYLINDER	27.92	28.03	27.84	l l	
LAB				İ	7,1
CYLINDER CURED IN FIELD	Field	Field	Field		
TYPE OF BREAK	#2	#2	#2		3
					SHEAR
TOTAL LOAD IN LBS.	68000	85000	97000	<u> </u>	— इति
UNIT LOAD IN PSI #	2408	3009	3363		
DATE CYLINDER MADE	10-3-63	10-3-63	10-3-63		الم الم الم
DATE CYLINDER TESTED	10-31-63	10-31-63	10-31-63	3	3PLIT
AGE WHEN CYL. TESTED	28 DAYS	28 DAYS	28 DA	YS	DAYS

REMARKS: #20-63 A - Appeared to have been fractured during construction probably accounting for the low break.

An impactometer test revealed the concrete in the bridge to be considerable stronger than the cylinder tested. I certify these tests are true and correct to the best of my knowledge.

Lay abbott, Superintendent

#### REPORT OF TESTS OF CONCRETE CYLINDERS

CONTRACTOR	Childs & C	ennors			
PROJECT	Bean Bloss	om Bridge		<u> </u>	
LOCATION OF POUR	Footers				
			•		
<u>I</u> .	NFORMATION FUL	RNISHED FROM	FIELD		
DATE CYLINDER MADE	-3-63		· •	<del></del>	<b>-</b>
SAMPLE MARKED	19-63 A	19-63 B	<del>_</del>		4
SPECIFIED STRENGTH	<del></del>	<u> </u>			-
TYPE OF MIX	Class F	<u> </u>			53.50
MATERIAL USED:		WEIGHTS PER			
	CONTENT	ВАТОН <b>658</b>	(BF	RAND) rtland Ceme	- C 20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
CEMENT FINE AGGREGATE				Gravel Co	
COARSE AGGREGATE				ushed Stone	
WATER				R YARD	
ADMIXTURE	A. E. Age	nt:	GALS.FE	K TAND	
SLUMP OBTAINED IN INS					
CONCRETE FURNISHED BY					
SAMPLED FROM TRUCK NO	1	TIME SAMP	'L ED	70 ° <sub>F</sub>	
WEATHER AND TEMP.	75 °F	_ TEMP. OF	CONCRETE	70 <sup>∪</sup> F	12.5%
CYLINDERS MADE BY	Contracto	r informati	ON BY T.P	•	2
SAMPLE NUMBER	10 21 (2	<del>,                                      </del>	<del></del>	<del> </del>	COME SHEAR
CYLINDER RECEIVED	10-31-63		<del> </del>		
WEIGHT OF CYLINDER					- [:\\-1
CYLINDER CURED IN FIELD.	Field	Field			
TYPE OF BREAK	#2	#2			3
TOTAL LOAD IN LBS.	93000	87000			SHEAR
UNIT LOAD IN PSI	3292	3080	<u> </u>		
DATE CYLINDER MADE	10-3-63	10-3-63			المالية المالية المالية المالية المالية المالية المالية المالية المالية المالية المالية المالية المالية المالية
DATE CYLINDER TESTED	10-31-63	10-31-63			4 SPLIT
AGE WHEN CYL. TESTED	28 DAYS	28 DAY	S DA	YS DAYS	s
					_

REMARKS: An impactometer test revealed the concrete in the bridge to be considerable stronger than the cylinder tested.

I certify these tests are true and correct to the best of my knowledge.

Abbott, Superintendent

# REPORT OF TESTS OF CONCRETE CYLINDERS

CONTRACTOR	RACTORChilds & Connors							
PROJECT	Bean Blossom Bridge							
LOCATION OF POUR	Wings				·····			
<u>IN</u>	FORMATION FUL	RNISHED FROM	FIELD					
DATE CYLINDER MADE10-	-24-63							
SAMPLE MARKED	18-63				•			
SPECIFIED STRENGTH		·						
TYPE OF MIX	Class F	<u> </u>		•	<u>€TF</u>			
MATERIAL USED:	MO I STURE CONTENT	WEIGHTS PER	SOURCE OF N					
CEMENT	<u> </u>	658 658	(2.0.1.	· ·	12/13/19			
FINE AGGREGATE		1265			<b>//</b> .\\			
COARSE AGGREGATE		1914			71			
WATER		R SACK		'ARD	CONE			
ADMIXTURE	A. E. Ag	ent	<del></del>		, A. w			
SLUMP OBTAINED IN INS	5"	AIR CONTEN	Τ	4 1/2 %	0.0			
CONCRETE FURNISHED BY	Ready Mix	#2			(4)(c)			
SAMPLED FROM TRUCK NO	<b>80</b> ° <sub>F</sub>	TIME SAMPL	ED		<b>.</b> //•¾			
WEATHER AND TEMP		_ TEMP. OF C	ONCRETE	70 °F	7.0			
CYLINDERS MADE BY	Contractor	INFORMATIO	N BY		2			
SAMPLE NUMBER		<del>,</del>			CONE SHE			
CYLINDER RECEIVED	10-31-63							
WEIGHT OF CYLINDER	29.52				المراد			
LAB CYLINDER CURED IN FIELD	Lab.							
TYPE OF BREAK	#2				3			
TOTAL LOAD IN LBS.	102000				SHEAR			
UNIT LOAD IN PSI	3611							
DATE CYLINDER MADE	10-24-63		,		٥			
DATE CYLINDER TESTED	10-31-63			·	4 3plit			
AGE WHEN CYL. TESTED	7 DAYS	DAYS	DAYS	DAYS				

REMARKS: I certify these tests are true and correct to the best of my knowledge.

Jay White Hay Abbott, Superintendent

Report No. 23-63

#### REPORT OF TESTS OF CONCRETE CYLINDERS

CONTRACTOR	Childs &	Connors						
PROJECT	Bean Blossom Bridge							
LOCATION OF POUR	Mud Wall							
. <u>IN</u>	FORMATION FUL	RNISHED FROM	FIELD					
DATE CYLINDER MADE10-	18-63							
SAMPLE MARKED	23-63 A	23-63 B				$\exists$		
SPECIFIED STRENGTH		,						
TYPE OF MIX	Class F	<u> </u>			<del>.</del>	<u> </u>		
MATERIAL USED:	.MOISTURE				IATERI AL			
CEMENT	CONTENT	658 658	Lehigh	Port	land Ceme	ent M.		
FINE AGGREGATE		1265			Gravel C			
COARSE AGGREGATE		1914	Blgtn.	Crus	hed Stone	e 1		
WATER	GALS. PER SACKGALS.PER YARD					CONE		
ADMIXTURE	A. E. Ag	ent				- P. 07		
SILIMP ORTAINED IN INS	5" At Pla	nt AIR CONTE	NT		4 %	60//9		
CONCRETE FURNISHED BY	S" At Plant AIR CONTENT 4 % Ready Mix #2							
SAMPLED FROM TRUCK NO			L ED					
WEATHER AND TEMP.	<b>68</b> <sup>0</sup> F	TIME SAMP _ TEMP. OF	CONCRETE		70 <sup>0</sup> F			
CYLINDERS MADE BY	Contractor	INFORMATI	ON BY	P		2		
SAMPLE NUMBER						CONTE SHE		
CYLINDER RECEIVED	11-18-63	11-18-63						
WEIGHT OF CYLINDER		· · · · · · · · · · · · · · · · · ·				-		
CYLINDER CURED IN FIELD	Field	Field						
TYPE OF BREAK	#2	#2				3		
TOTAL LOAD IN LBS.	133000	135000			· <del>-</del> ·	SHEAR		
UNIT LOAD IN PSI	4708	4778						
DATE CYLINDER MADE	10-18-63	10-18-63	ļ			الم الم		
DATE CYLINDER TESTED	11-18-63	11-18-63				4 . SPLIT		
AGE WHEN CYL. TESTED	28 DAYS	28 DAYS	5	DAYS	DAY	s		

REMARKS: I certify these tests are true and correct to the best of my knowledge.

Jay Abott, Superintendent

#### REPORT OF TESTS OF CONCRETE CYLINDERS

CONTRACTOR	Childs & Connors							
PROJECT	Bean Blossom Bridge							
LOCATION OF POUR	Floor							
IN	FORMATION FUL	RNISHED FROM	FIELD					
DATE 07/1 LUDED 11/10	19 42							
DATE CYLINDER MADESAMPLE MARKED	22-63 A	22-63 B			•			
SPECIFIED STRENGTH		22-03 D		<u> </u>				
TYPE OF MIX	Class F	İ			<u> </u>			
MATERIAL USED:	MOISTURE							
CEMENT	CONTENT	658 BATCH	Lehigh	\$ /A(i				
FINE AGGREGATE		265		Co. Grave	1 ///\			
COARSE AGGREGATE								
WATER	J914 Blgtn. Crushed Ston GALS. PER SACKGALS.PER YARD							
ADMIXTURE	A. E. Agent							
CLUMB ORTAINED IN INC	511	4.5		4 172	or			
SLUMP OBTAINED IN INS.	S" AIR CONTENT 4 1/2 % Ready Mix #2							
CONCRETE FURNISHED BY SAMPLED FROM TRUCK NO	<del></del>				<b>─</b> ─ <b>▶</b> ‴∷			
WEATHER AND TEMP	70 °F TEMP. OF CONCRETE 68 °F							
CYLINDERS MADE BY	Contractor	_ INFORMATION	ON BY T.	P .	2			
SAMPLE NUMBER		INTOMMATI	ON DI		CONE SHE			
CYLINDER RECEIVED	11-16-63				1,000			
WEIGHT OF CYLINDER								
LAB								
CYLINDER CURED IN FIELD	Field	FIELD	ļ		00			
,			<u> </u>					
TYPE OF BREAK	#2	# 2.	ļ		3			
	0.700	110000			SHEAR			
TOTAL LOAD IN LBS	97000	110 000						
	3434	3894						
UNIT LOAD IN PSI	3434	3011	†					
DATE CYLINDER MADE	11-8-63	11/8,63			-((a))			
		l						
DATE CYLINDER TESTED	11-18-63	11/25/63			#			
	1	l			3PLIT			
AGE WHEN CYL. TESTED	10 DAYS	26 DAYS	<u> </u>	AYS [	DAYS			

REMARKS: I certify these tests are true and correct to the best of my knowledge.

Jay Abbott, Superintendent



# NU-KOTE...

# the new typewriter carbon that makes the cleanest copies ever outlasts ordinary carbon 3 to 1!

NU-KOTE is made of a special liquid ink and sponge plastic formulation which is permanently affixed to the surface of a special type of paper.

This can be easily seen when a sheet of NU-KOTE carbon paper is tightly crushed and quickly unfolded. The liquid ink is actually forced from the plastic surface and then quickly retreats back into the "sponge-like" plastic.

NU-KOTE copies are the result of typewriter key impact. This impact transfers the liquid ink from the plastic sponge to the copy paper.

NU-KOTE copies can be compared with the writing from a ball point pen or the print from a typewriter ribbon. With NU-KOTE, there is no transfer of a pile or blob of solid carbon onto the copy paper.

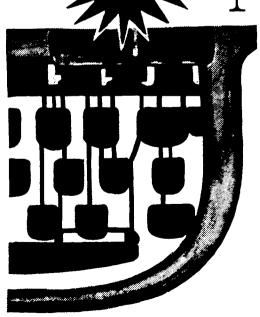
This means that all copies are clean, clear, distinct, and smudge or smear proof.

NU-KOTE will outwear all ordinary or conventional types of carbon papers at least 3 to 1!

NU-KOTE is supplied in one weight and one finish and will fit more than 90% of all typing requirements.

<u>NU-KOTE</u> excels on all typewriters—from the soft action of the noiseless to the hard impact of the electric typewriter.

# NU-KOTE.



For Best Results Keep in this Folder



# BEDFORD MISC. IRON & STEEL CO.

Engineers and Fabricators

GEORGE G. JOHNSON

BEDFORD, INDIANA

legon

#### U.S. ARMY ENGINEER DISTRICT, LOUISVILLE

CORPS OF ENGINEERS
830 WEST BROADWAY
LOUISVILLE 3. KENTUCKY

NODRESS REPLY TO:

DISTRICT ENGINEER

U.S. ARMY ENGINEER DISTRICT, LOUISVILLE

CORPS OF ENGINEERS
P.O. BOX 59

LOUISVILLE 1, KY.

Fred Carlotte Control of C

REFER TO FILE NO. OVLGR

9 March 1962

Woodward Engineering Co., Inc. 1020 7th Street Bedford, Indiana

ATTENTION: Mr. George Johnson Sales Representative

Subject: Monroe Reservoir -

Brummetts Creek Rd.

#### Gentlemen:

Reference is made to your letter dated 15 February 1962 requesting information relative to Monroe Reservoir project.

The relocation of Monroe County Roads affected by construction of the Reservoir has been discussed with County Surveyor, Mr. John T. Stapleton. Prints of the Reservoir area have been furnished the County.

Additional prints of Monroe Reservoir area can be obtained from this office at the cost of \$0.50 each and Land Segment Maps at the cost of \$0.45 each. A check or money order should accompany your order and be made payable to the Treasurer of the United States.

The plan of relocation now being considered does not include Brummetts Creek road. Based on reservoir regulation studies made to date for the period of 1936 through 1959 (24 years), this road at elevation 551 will be flooded an average of 9.6 days per year, or 2.83% of time. Based on the same studies, duration of flooding at flood pool elevation 556 will be an average of 2.5 days per year or 0.68% of time. The longest period during past 24 years that the Reservoir would have been held at flood pool was 24 days at any one time.

Under our proposed plan of relocation, low steel of a bridge over the main stream is set at elevation 558. Considering that Brummetts Creek road is of less importance than a main crossing of the Reservoir, low steel could be set at a lower elevation.

If additional information is required it is suggested that a meeting be scheduled to discuss the matter in this office.

Very truly yours,

R. H. HAYES

Chief, Engineering Division -

SHEET (

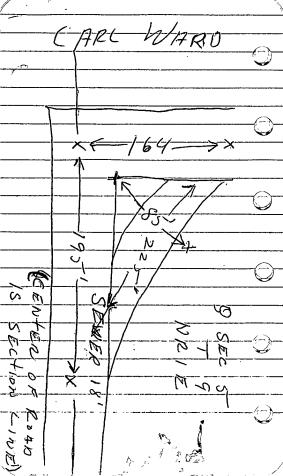
# BEDFORD MISC. IRON AND STEEL CO.

STEEL BUILDING PRODUCTS

. Maria Art And

# ESTIMATE SHEET

ESTIMATE	FOR				MADE BI			
CONTRAC	TOR			<u> </u>	DATE	, <del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>	· · · · · · · · · · · · · · · · · · ·	
LOCATION	N	<del></del>		E	STIMATE N	0		
No. Pieces	MATERIAL	Wt. per ft.	LENGTH	DESCRIPTION	WEIGHT	PRICE	AMOUNT	
				March 12, 1962	8:3	154	M.	
NA.	2. STAPLETON			1700 5071 1 27 17.				
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				Will Wanty Prizes				
5/	FORT ON TIME	'E.	0	FIND A LETTER,	Fran Tu	1	PAQ.	
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W	HAT YOU WE	RE LOC	KING	FOR AND WILL STI	LL DE G	000	#	<del> </del>
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<i>F</i>	POVECT LAT	eR.				2		<del>                                     </del>
	Have	You	DRILLE	D AT THE CLEAR (	REER T	0		<del> </del>
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	US TAKES Y	LACE	-			-		<del> </del>
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							<u> </u>	<del> </del> -
	P.S. MR.	ntoppn	ARD 1	6 ENTERING THE BLOC	DAING TO A	4	-	+
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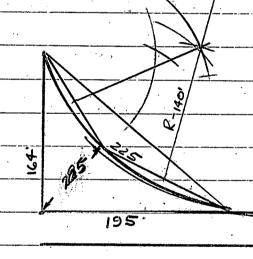


# CARL WARD-TO- MONROE CO. MOINIM ROAD ENSEMBENT NOV. 7, 1963 SECTION 5- TON; RIE

A PARTOOF THE NW/4 OF THE SWIN OR SECTION 5

BEGINNING AT A POINT THAT IS 500 FT. EAST OF THE S.W. JORNER OF THE SAID 14-14- THENCE RUNNING EAST FOR 195 FT, THENCE RUNNING IN A NORTHWESTERLY DIRECTION OVER + ALONG A CURVE HAVING A RADIUS OF 140 FT FOR A DISTANCE OF 225 FT, THENCE RUNNING SOUTH FOR 164 FT. + TO THE PLACE OF BEGINNING.

CONTAINING IN ALL 0.36 ARRES, MORE OR LASS.



### RECOMMENDATIONS FOR ROAD IMPROVEMENTS IN THE MONROE RESERVOIR COMMUNITY

Monroe Reservoir Community Coordinating Committee

The Monroe Reservoir, when completed, will be the largest body of water in the State of Indiana, and as such can contribute greatly to the economic growth of the area and to the State of Indiana. Other reservoirs now in operation have demonstrated the tremendous attraction which they have especially in the fields of recreation and tourism, and the extra burden place on the existing road systems from the resultant traffic increase to and around them.

The Monroe Reservoir Community Coordinating Committee, realizing that the present roads would be inadequate in handling the anticipated traffic increase, and recognizing that an inadequate transportation system would have a serious detrimental impact on the economic and recreational development of the Monroe Reservoir Area, has developed a Master Road Plan to coordinate the planning of the various governmental agencies involved. In making its recommendations, the Committee gave consideration to the improvement of highways and roads from dense population areas to the public access sites on the reservoir and to the improvement of circumferential routes to make most areas easily accessible and to provide a smooth flow of traffic around the reservoir. The Master Road Plan indicates the roads that will need improvement and establishes priorities and responsibilities. No attempt was made to determine the degree or amount of improvement or to set a schedule for completion of these improvements since it was felt these items could be better determined by more detailed engineering analysis and study.

Following are the recommendations of the Committee to the State of Indiana on existing state highways listed in the order of priority:

- (1) Improvement of State Road 37 from Bedford to Martinsville.
- (2) Improvement of both State Road 46 and U. S. Highway 50 concurrently.

Following are the recommendations of the Committee on major road improvements needed in the Monroe Reservoir Community to connect the major recreational areas with the existing State Highway System. The Committee feels that these roads should be improved and maintained by the State of Indiana and/or the Corps of Engineers, wherever the capabilities of the Corps of Engineers permit. In the order of priority the recommendations are:

(1) Improvement of the road from State Road 37 at Harrodsburg to the Dam and also to Mt. Ebel. (By the Corps of Engineers)

- (2) Improvement of Knight Ridge Road from State Road 46 south to the north end of the causeway, and of the road from the south end of the causeway south to U. S. Highway 50. (By the State of Indiana)
- (3) Relocation of State Road 135 to the present location of the Maumee to Belmont Road, with the State to abandon the present stretch of State Road 135 from Nashville to Brownstown, and the Counties to accept this abandoned stretch into the county road system. (By the State of Indiana)
- (4) Improvement of the Fairfax Road from Becks Corner through Sanders to Mt. Ebel. (By the State of Indiana)
- (5) Improvement of Tower Ridge Road (also known as Hickory Ridge Road) from the south end of the causeway road east to connect with the proposed relocated State Road 135. (By the State of Indiana)
- (6) Extension of the road across the dam to also cross the spillway and connect with a county road south. (By the Corps of Engineers)

Following are the recommendations of the Committee to the Counties on county roads to be improved to complete the necessary circumferential routes. The counties are listed in alphabetical order. The recommendations are not necessarily in the order of priority since the Committee agreed that this should be determined by the Counties.

# Brown County:

- (1) Improvement of the road from the proposed relocated State
  Road 135 in the vicinity of the Steele Memorial to the relocated
  Deckard Cemetery road and on to the Monroe County line on
  the west.
- (2) Improvement of the Elkinsville to Story Road from Elkinsville east and then north to the relocated road provided by the Corps of Engineers.
- (3) Improvement of Crooked Creek road from public access site number 8 to State Road 46.
- (4) Improvement of Axsom Branch Road to connect with the relocated Deckard Cemetery Road.

### Jackson County;

- (1) Improvement of the east-west road north of Seymour from Interstate 65 to Courtland.
- (2) Improvement of the road from Freetown through Houston to the proposed relocated State Road 135.

#### Lawrence County:

- (1) Improvement of the road from Guthrie northeast to the county line (connecting with the Chapel Hill Road).
- (2) Improvement of the road from the Monroe County line south through Barlettsville to State Road 58.

#### Monroe County:

- (1) Improvement of Strain Ridge Road from Smithville south to connect with the proposed improved road from Harrodsburg to Mt. Ebel.
- (2) Improvement of the east-west Smithville Road from State Road 37 through Smithville to Handy Road, and Handy Road northwest to the Stipp Road.
- (3) Improvement of Moffett Lane and Stipp Road from the Fairfax Road to the Moores Creek Road, and of Swartz Road from Moores Creek Road to Knight Ridge Road.
- (4) Improvement of Moores Creek Road and Rhoher Road from State Road 37 to the Stipp Road.
- (5) Improvement of Moores Pike from the Bloomington City Limits to Knight Ridge Road.
- (6) Improvement of Chapel Hill Road from the south end of the causeway southwest to Chapel Hill, then west and southwest from Chapel Hill to the Lawrence County Line.
- (7) Improvement of the road listed under "Brown County, item (1)," from the Brown County line west.
- (8) Improvement of the road south from Chapel Hill to the Lawrence County line.

#### WILLIAM HENRY SNYDER

ATTORNEY AT LAW 122 EAST SIXTH STREET BLOOMINGTON. INDIANA

WILLIAM HENRY SNYDER
JAMES R. COTNER

TELEPHONE 6369

September 17, 1959

Mr. Dowey A. Davis 421 East Garfield Street Michigan City, Indiana

Re: Mt. Tabor Bridge - Road construction project

Dear Mr. Davis:

You will recall that last December we had an exchange of correspondence regarding the straightening of the Mt. Tabor Road which runs through your property south of Bean Blossom Creek. With your letter of December 29, you forwarded to me and the Board of Commissioners of Monroe County a sketch of that portion of your farm involved in the road straightening project and made certain suggestions for changing the location of the Road.

The Board of Commissioners of Monroe County, Indiana, has now let a contract for the construction of a brand new bridge over Bean Blossom Creek at the foot of the hill and construction on the bridge will start within two weeks.

In connection with the construction of this bridge, our County Engineer and the bridge engineers who designed the bridge have concluded that the safest and best route for the new approach to the bridge through your property is indicated by the red line superimposed on your sketch which I am returning to you herewith. The survey description of this new location of the Mt. Tabor Road is contained in the right of way deed which I also enclose he rewith for your study and consideration.

Although it will cost the County a little more money to relocate the road in accordance with the recommendations of the engineers, we feel that in view of the expenditure of County funds for a new bridge we should follow the recommendations of the engineers with regard to the approach to the bridge and the development of a curve with a less sharp angle.

All the right of way across your property lies almost immediately west of the existing power lines as they run through your property. This information is given you so that you can orient the matter.

Mr. Dewey A. Davis

Encl.

September 17, 1959

In view of the fact that the Commissioners are highly desirous of proceeding with the completion of the bridge and the re-routing of the road from the bridge up through your property, it will be appreciated if you could give favorable consideration to this matter at your early convenience.

As stated, the legal description contained in the right of way deed conforms to the red line as it is shown on the sketch enclosed herewith.

Please let me hear from you as to your addision in the matter. Needless to say, we greatly appreciate your ina cooperation and assistance.

pectfully yours, h Snyder WHS: bw

## RIGHT-OF-WAY DEED FOR COUNTY HIGHWAY

THIS INDENTURE WITNESSETH, That Dewey A. Davis and Ruie A.

Davis, husband and wife, of Laporte County, Indiana, hereby grant,

bargain, sell and convey to The Board of Commissioners of Monroe

County, Indiana, of Monroe County, in the State of Indiana, for and

in consideration of One Dollar (\$1.00) and other valuable considerations

not expressed herein, the receipt whereof is hereby acknowledged,

the following described real estate located in Monroe County, in the

State of Indiana, to-wit:

A strip of ground twenty-five (25) feet on each side and parallel to the following described center line:

A part of the Northeast Quarter (NE $\frac{1}{4}$ ) of Section Sixteen (16), Township Ten (10) North, Range Two (2) West, beginning at a point that is one thousand five hundred (1500) feet North and two thousand three hundred eighty (2380) feet East of the Southwest corner of the said Northeast quarter and in the center line of Mt. Tabor Road; thence running North fifteen (15) degrees West for a distance of one thousand fifty (1050) feet more or less, and to a point in the center of the said Mt. Tabor Road, containing in all one and twenty-one hundredths (1.21) acres, more or less.

The above described real estate is to be used by the grantes herein for the purpose of re-locating and rebuilding the Mt. Tabor Road from the approach of the new bridge to the terminal point of the above description; it is understood and agreed that in the event the above described right-of-way for said road shall cease to be used as a public or county highway at any time in the future, title to said real estate shall revert to the grantors or their heirs and assigns or successors in title.

It is a further condition of this grant of right-of-way that The Board of Commissioners of Monroe County shall clean the old fence rows of fences, bushes and debris so as to make the land being vacated by the County in re-locating the Mt. Tabor Road as usable as possible; the rubbish and debris from cleaning the old fence rows, bushes and right-of-way area may be dumped in gullies on adjacent property of the grantors.

It is a further condition of this grant of right-of-way that when the new road over the above described route has been constructed, The Board of Commissioners of Monroe County, Indiana, will vacate the old roadway and the real estate involved therein shall be and become the property of the grantors who are the owners of all the real estate lying on either side of the roadway to be abandoned and vacated.

In Wit	ness Whereof	, The said granton	es have hereunto affixed
their hands	and seals	n this the	lay of September, 1959.
		(SEAL)	(SEAL

Dewey A. Davis

Ruie A. Davis

2 T &.

STATE OF INDIANA )
COUNTY OF LAPORTE)

Before me, the undersigned, a Notary Public in and for said County and State, this \_\_\_\_\_ day of September, 1959, personally appeared the within named Dewey A. Davis and Ruie A. Davis, husband and wife, grantors in the above conveyance and acknowledged the execution of the same to be their voluntary act and deed, for the uses and purposes hereinabove mentioned.

In Witness Whereof, I have hereunto subscribed my name and affixed my Notarial Seal.

My commission expires:

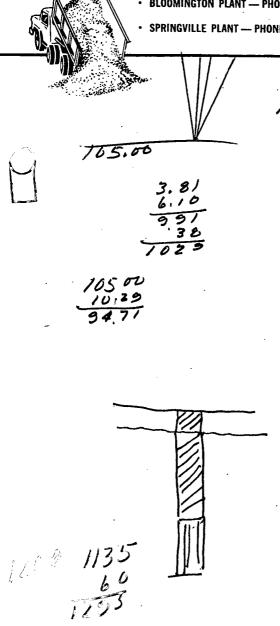
Notary Public

This instrument was prepared by WILLIAM HENRY SNYDER Attorney-at-Law 122 East Sixth Street Bloomington, Indiana

# BLOOMINGTON CRUSHED STONE CO. INC.







GRADE A CRUSHED STONE - AGRICULTURAL LIMESTONE

LNE 29 1961 ROY WILSON ECTION 36. MONROE CO. LAUIANA S.R. 48 A PART OF THE INE /4 OF THE Tp. Line NW /4 OF SECTION 1-TEN, RZW VAN BUREN TP-MONROE CO, MO. BEGINNING AT THE NE. COENER OF THE SAID 14-1/4; THENCE RUNNING WEST FOR 82 FT; THENCE RUNNING SOUTH & DECKER -17 MINUTES EAST FOR A DISTANCE OF 634.09 FT. I TO A POINT ON THE EAST OF THE SAID NE' OF THE NW 14; THENCE RUNNING NORTH OVER + ALONG THE SAID EAST LINE SECTION 1 VANBULEN TP OF THE SAID 14-14 FOR 627. 5 FT + TO THE PLACE OF BEGINNING, CONTAINING IN ALL 0.59 ACKES, MORE OF LESS.

# Public Service Company of Indiana. INC.

1000 EAST MAIN STREET · PLAINFIELD, INDIANA
April 30, 1964

EDWIN M. GUE

Mr. John Stapleton Monroe County Engineer County Court House Bloomington, Indiana

Dear Mr. Stapleton:

Thank you for meeting with Mr. Beard and me Friday, April 24, 1964. to discuss the relocation of our transmission line on Mrs. Wylie's property. This letter is to confirm what was agreed on at the meeting.

- 1. The right-of-way or deed that the county has obtained from Mrs. Wylie runs from the creek on the east side of the creosote plant to old State Road #37 along the south side of Mrs. Wylie's property. This instrument calls for 25 feet north from the centerline of Creosote Road. (Or Winslow Road)
- 2. The County will not stake the north edge of this right-of-way. In order to stake the north edge of the right-of-way Public Service Company should measure the present pavement width and divide by two in order to find the centerline of the road. The centerline should approximate a straight line. The north edge of the right-of-way is 25 feet north of this centerline.
- 3. Public Service Company should stake their poles 1.5 feet south of the north edge of the right-of-way. This will keep the north edge of the pole on County property.
- 4. Public Service Company is not to place any more poles on this right-of-way than was originally engineered.
- 5. Public Service Company can cut any trees on this 25' right-of-way.

If you should require further information on this transmission line, please contact me at our office in Plainfield.

Sincerely,

RWP/bcs

cc: M. M. Beard

E. F. Kixmiller

W. A. Schulz

H. F. Hilton

J. E. McKinster

Robert W. Prather Robert W. Prother

# January 14, 1964

Mr. James R. Cotner 122 E. 6th Street P. O. Box 787 Bloomington, Indiana

Re: Project #1, Spanker's Creek Bridge M & S Construction Company Our file: 63-674

Dear Mr. Cotner:

As you know the American Insurance Company hold a bond for M & S Construction Company who have a contract to complete the Spanker's Creek Bridge. This office represents the American Insurance Company.

I have just discussed this matter with Mr. Herschel Seamon, Secretary of the M & S Construction Company. He informs me the the bridge is completed and that the contract has been fulfilled.

I would appreciate a word from you or the county engineer to the fact that this bridge or project has been accepted by the county engineer and the matter may be considered as concluded.

At your convenience may I hear from you'r

Very truly yours,

C. C. WELLS CLAIM SERVICE

C. C. Wells CCW/gm

cc: American Insurance Company John T. Stapleton 20 sites Contin home Co H.D. \$ 20,000 CM Sorp

#### SNYDER, BUNGER, COTNER & HARRELL

122 EAST SIXTH STREET
P. O. BOX 787
BLOOMINGTON, INDIANA

WILLIAM HENRY SNYDER LEN E. BUNGER, JR. JAMES R. COTNER HAROLD A. HARRELL October 17, 1963

TELE PHONE AREA CODE 812 332-9295

American Insurance Company 15 Washington Street Newark 1, New Jersey

#### Gentlemen:

Upon July 22, 1963, your company issued a bond for the M & S Construction Company, Inc., upon the granting of a construction contract to that company by the Board of Commissioners of Monroe County, Indiana.

The work described in the bond is listed as follows:

General construction of Project 1, replacement of Bridge over Spanker's Creek near Clear Creek.

Under the specifications, the contractor was to begin work within thirty days which would have meant work was to begin on or before August 21, 1963.

This is to inform you that the contractor has done no work on this job and that the Board of Commissioners of Monroe County look to your company for reimbursement for all loss resulting from his failure to perform the contract as agreed to.

In the event that you wish to discuss this with any official of the County, I would suggest that your representative contact me as County Attorney or John Stapleton, County Engineer, Court House, Bloomington, Indiana.

Sincerely yours,

James R. Cotner County Attorney Monroe County, Indiana

#### JRC:bh

CC: Mr. John T. Stapleton

Mr. Rodney Brown

Mr. John Hooker

Mr. Maurice Jones

Mr. Lester Musgrave

The successful bidder at the time of signing the contract will be required at his own expense to furnish bond guaranteeing faithful execution of the contract in the full amount of the contract price, executed by the bidder and surety and to be approved by the Board, on the bond form marked "Performance Bond" and bound herewith. The performance bond shall contain the following clauses: "The surety for value received hereby stipulates and agrees that no change or extension of time alteration or additions to the terms of the contract or the work to be performed thereunder, or to the specifications accompanying the same shall in anywise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to terms on the contract, or to the work or to the specifications.

The successful bidder of this work will be required to pay and to require that any sub-contractor pay wage rates which shall not be less than the prescribed scales of wates required by law. In other words, the wates paid on any of this work shall not be less than the prevailing wage scale for this area.

Where, in these specifications or on the plans, one or more certain materials, trade name or article of certain manufacture are mentioned, it is done for the sole purpose of establishing a basis or durability and efficiency and not for the purpose of restricting competition.

The bidders are required to visit the site and to inform themselves fully of conditions relative to the construction and labor under which the work will be done.

The County Auditor will inform each bidder, upon request, as to the amount and kind of insurance required by the County, for this construction. The bidders likewise will be given full information concerning the amount and kind of bonds required by the County, in case these specifications are not clear to any bidder.

Preference shall be given to qualified local residents in the employment of labor and mechanics for work on the projects under this contract. No person under the age of Sixteen (16) years shall be employed on the project covered by these specifications.

There shall be no discrimination by reason of race, creed, color or political affiliations (except Communists - who shall not be employed) in the employment of person or persons for work on the project covered by these specifications, who are qualified by training and experience for such work; however, all persons employed on this work must be citizens of the United States of America.

Nothing in this contract shall create contractual relations between the sub-contractor and the Board of County Commissioners.

The work shall be started at the time stated in the notice to the Contractor to proceed and shall be completed in \_\_\_\_\_ consecutive calendar days from and after the date stated in said notice.

The Contractor shall hold Monroe County, Indiana, free from any losses, damages, injuries or infringements due to the work covered by these specifications.

The word "Board" as used in these specifications, proposal and contract, refers in every case to the Board of Monroe County, Indiana, Commissioners at Bloomington, Indiana.

The word "Contractor" as used in these specifications or the contract refers in every case to the person, firm or corporation or co-partnership who has entered into a contract to carry out the provisions of these specifications and plans for the work covered by the same.

No omission of any detail from the specifications or drawings shall release the Contractor from furnishing any materials or item of equipment usual or proper nor from doing anything necessary for the proper complete construction.

~ JO

The Contractor shall keep a copy of these specifications and plans of his work on the site of his work at all times.

Unless otherwise stipulated in the plans and specifications, all materials, equipment and articles incorporated in the work covered by these plans and specifications shall be new and of the best grade of their prospective kinds, and shall be furnished by the Contractor along with necessary labor.

The Contractor will be responsible for any damages to the existing structure and adjacent structures to the project, or to this work already finished. All used or old materials or materials now in place shall be salvaged by the Contractor and stored in neat piles out of danger to the public in any way, and the Contractor shall be responsible for the same.

If any defect or failure on account of defective material or workmanship shall appear within one (1) year from the date of acceptance, the same shall be replaced or made good by the Contractor without cost to Monroe County, Indiana.

Payment for the work under this contract will be made on a lump sum basis after final acceptance of the work.

The Contractor shall at all times, keep the premises free from accumulation of waste materials or rubbish caused by his employees or work, and at the completion of the work, he shall remove all rubbish and surplus materials and leave the work and the site clean and ready for use.

Monroe County, Indiana, shall not be held responsible and will not replace cr make good any damages caused by storms, floods or any other acts of God however, the Contractor shall repair or replace any damages caused by the above mentioned causes to the adjacent structure or structures.

The Contractor shall furnish all materials required, shall furnish all necessary transportation, tools, a competent supervisor and all skilled and unskilled labor necessary and required to install and complete the work described on page one (1) of these specifications.

Specifications for the removal of all loose plaster and the re-plastering of white coat and brown coat, where necessary, and the painting of all walls and ceiling, radiators, baseboards, doors, and windor and door trims in the following locations as herein given: Jury Room, Probation Rooms, County School Superintendent Rooms, County Road Superintendent Rooms, Court Reporter's Room, Probate Clerk's Room. In the office of Circuit Court Judge, the loose plastering on the ceiling shall be removed and replaced with new plaster. The walls are to be paneled. The Judge is to furnish all materials for panel work. The Contractor shall furnish the labor for installing said materials.

The hole in the ceiling in the hall leading to the Jury Room shall be repaired, re-plastered and painted. A portion of the ceiling in the South Probation Room shall be removed and replaced for the reason that the plaster was placed before the Court House roof was repaired, the results being the same became wet and is now inferior. All cracked plastering shall be grooved and re-filled with plaster material.

All new plastering shall remain in place for ten (10) days before being sized and painted.

An oil paint shall be used, and the color for each room will be selected by the Department Head.

All wall and ceiling sufaces shall be cleaned until they are free of dust and other foreign materials and shall have \_\_\_\_\_coats. All plaster repair areas shall be sized and painted with sufficient coats to insure the same color as the other wall areas.

COUNTY ROADS RIGHT NAME DATE OF LENGTH WAY BEAN BLOSSOM TOWNSHIP Mt. Pleasant-Morgan Co. J. D. Brighton John Ellett 40: 1926 6360 1930 1925 7320 12390 401 401 Brocks-Cowden 1927 401 22120 Stierwalt-Miers-Bales 1922 401 16090 WASHINGTON TOWNSHIP 50† 50† W. B. Chambers 1926 20760 James B. Bastin 1928 22358 John Anderson (Also in Marion Twp.) 29378 1088**0** 1928 501 Tom Brown 1922 401 A. L. Ridge John Sealeo 1930 9740 5480 501 1929 401 Golliver Cemetery 1929 401 9818 MARION TOWNSHIP John Anderson (Also in Wash. 1928 501 29378 Twp.) J. A. McClary 1924 501 29880 RICHLAND TOWNSHIP McCullough 1923 401 12630 Frank Starnes 7532 8315 5900 401 1930 Learney Summitt 1928 401 Alexander Oliver 40 1920 Earlie Marshall 1926 501 10600 PAGE 2. VAN BUREN TOWNSHIP J. F. Baxter 1928 501 8080 Alonzo Harris Jacob Keller 1925 50! 9800

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1922	401	23700
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Walter Smith	1925	401	2560
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Harrell	1928 1928	40	7020
Mm. Mercer Reeves Fike	1928	401	1400
Melton Fike	1928		1828
Lew Dillman	1927	40	28 <b>10</b> 2 <b>00</b> 0
E. F. Carrell	1926 1926	70.	5600
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George Hayes (Also in Polk Twp.)	1923	501	10700
Joseph Hensley	1925	501	20800
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Henry Floyd	1929	401	9267
Myers Burge	1922	40°	11800 7260
Henry Floyd Burch Twp.	1930 1930	40°	8930
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Twp.)	1922	401	20700
Edward Lowe	1923	501	4150
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Luther Shields (Also in Perry			
Twp.)	1922	401	9000
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George Stewart Frank Clendennin (Also in Polk	1928	<b>拉O</b> :	9140
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Claude Kinser	1926	501	28600
Thurmar. Hayes	1928		7840
Frank Clendennin (Also in Clear Creek)	1922	401	13365
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# FIRST HICHLAND CORP.

MONROE CONTRY INDIANA.

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BEGINNING AT THE NE CORNER OF LOT 132

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GRAVES-REAL ESTATE; THENCE RUMING EAST

FOR EIGHT (8/6) + ONE HALF FEET; THENCE RUMING

NORTH TO A POINT THAT IS DIRECTLY EAST

OF THE SAID NE. CORNER OF LOT 132 IN THE

HIGHLAND VILLAGE 4TH ADDITION; THENCE RUMING

WEST FOR EIGHT (81/6) + ONE HALF FEET + TO THE

PLACE OF BECHNING.

773

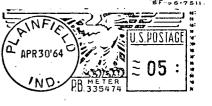
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Mt. Pleasant-Morgan Co.	1926	401	6360
J. D. Brighton	1930	40'	7320
John Ellett Brocks-Cowden	1925 1 <del>9</del> 27	401	12390 22120
Stierwalt-Miers-Bales	1922	40.	16090
	WASHINGTON TOW	NSHIP	
W. B. Chambers	1926	501	20760
James B. Bastin	1928	501	22358
John Anderson (Also in Marion	n mad	10° 60. 6	AAADA
Twp.)	1928 1922	50° 40°	29378 10880
Tom Brown A. L. Ridge	1930	501	9740
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Golliver Cemetery	1929	40.	9818
	MARION TOWNSHI	P	
John Anderson (Also in Wash. Twp.)	1928	501	29378
J. A. McClary	1924	501	29880
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McCullough	1923	40:	12630
Frank Starnes	1930	40.	7532
Learney Summitt	1928	40.	8315
Alexander Oliver Earlie Marshall	1920 1926	40' 50'	5900 10600
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Alonzo Harris	1925	501	9800
Jacob Keller	1930	301	6764
F. Keller Ogle Breeden (Also in Indian	1929	501	12635
(Creek)	1922	401	23700
	PERRY TOWNSHI	P	
Ralph Woolery		301	6000
Howard Borland	1930	40'	3070
Ross Bunger	1930	30'	1225
Van Buskirk	1926	40'	2260
Leslie Winslow	1925 1929	40	4730
M. Winder Grant Padden	1929	401	3330 1730
Maxwell Lane	1924	30'	7033
Chas. Woolery	1930	70.	10625
Everett Smith	1926	40'	12925
Homer Carpenter	1924	331	7200
Wylie Konnedy	1928	401	9750
Ray M. Phelps	1930	301	1835
G. C. Carron	1930	40	2980 5600
Thena Wylle	1926 1926	40'	9800
Ralph Stipp E. E. Hoadley	1928	40.	12910
Roy C. Pike	1927	40'	3600
Aaron Gordon	1928	40.	3605

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Reeves Pike	1928	401	1700		
Melton Pike	1928	44 44 40 to	1628		
Lew Dillman	1927	401	5810		
E. F. Carrell	1926	40.	5000		
Bruce Bare	1926	401	5600		
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Joseph Hensley	1925	501	20800		
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Henry Floyd	1929	401	9267		
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Henry Ployd	1930	40.	7260		
Burch Twp.	1930	40	8930		
Ogle Breeden (Also in Van Buren					
Twp.)	1922	401	20700		
Edward Lowe	1923	501	4150		
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George Stewart	1928	40.	9140		
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Creek)	1922	401	13365		
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PUBLIC SERVICE COMPANY OF INDIANA, INC.

1000 EAST MAIN STREET - PLAINFIELD, INDIANA

ELECTRICITY...
your bigges
BARGAIN!



Mr. John Stapleton Monroe County Engineer County Court House Bloomington, Indiana

New Driveiin front of Monroe County Jail Bloomington, Indiana. August 1,1960 Walk in front of Jail to remain / Line B north portion of drive in place 5000 lb.Conc.recommended \*7" thick with 6" stone base 21.331 Remove this radius line\_Ci 2' radius 4 see deatil 2 see detailli 3 Radius Line A-edge of street pavement WALNUTESTREET Detail 1 John T. Stapletore, C.C. Detail 2

Promise Mount Co. Ford

Istimate (project = 1.) Brunnets Creek Conerde 86 4 @ \$100 \$ 8500 36 cr @ \$90 \$ 3240 Kebar 8390 @ 170.13 \$4. 59/ \$2 erection beek \$8262 Q, R 106 LF @ 5, - \$530 MISCI, N \$21.892 21.892 # 24,081 lstimate \$ 24000 # 8630 Concrete & 363cy @\$100 Kebar 11735@ 150 \$ 1760 Beam 350 19.60+ 3- @ 22.60 \$ 7910 Guardrael 145 @ 500 \$ 725 Filmy 200 @ 5,00 \$ 1000 20025 Harrods buy 2003 # 22028 Istemate \$ 22000 AMBRICAN

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# WOODWARD

Beummerrs CRE	5/
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\$27.535.00	
	w.w.P

Per-PATING OF (29, 134.00 BEUMMETTS CLEK BRIDGE 33,000,00-REGIES, 23,866.00 HARRODSBURG BRIDGE OF Co. Councile 53,000,000

WALTER WOODWARD

130UMMETT CREEK-BRIDGE - 24-535,00

LARRODSBURG BRIDGE - 21, 800.00

27,535,00 22,000 00 49,535,00 300,00 49,535,00

\$58,000.0c

FIRST HIGHLAND CORP. TO BOARD OF MONEOR G. COMM.

A pr. of the 14E/4- NE/4 OF Sec. 1- TEN; REW Beg. AT THE HE COE, UP THE SAID /4-14; THENCE RUHHING IX 89-02'-30" West 79.77 FT. To A POINT ON A CURUR TO THE LEFT & HAVING A RADIUS 462.39 F, thence Dauchenstorly along Raid Cherre 56.72 Fr. To THE P.T. of Daid acros; them Routh 12-0'-0' EAST to the PC. of a Cure to the reight hovery a roders 1 545, 88 St; Ulum Dombrestorly over + along Rais Cure 114, 33 ft & to the P.T. of Raid aire; Theme eass 25- ft, to a point an the & of any Pake, Daid & buy Mu /2 Dection luce of Dection 1- Tex; Rew there nout over & along the & of Curry pike to the place of Benny.

STUKEY ROAD BRIDGE OFFICE COPY

#### SPECIFICATIONS AND PROPOSAL

MONROE COUNTY BRIDGES

John T. Stapelton County Engineer

# INFORMATION FOR BIDDERS

- 1. Sealed proposals for the following described work will be received by the County Commissioners of \_\_\_\_\_\_ County, Indiana at their office in the Court House until \_\_\_\_\_ o'clock \_\_\_\_\_, 1964, at which place and hour they will be publicly opened and read.
- 2. BIDS. A whit price shall be submitted for each item as set out in the proposal. Each bid must be accompanied with a Certified Check or Bid Bond for 10% of the total amount.
- 31 RIGHT TO REJECT BIDS. The Board expressly reserves the right to reject any and/or all bids.
- 41 SIGNATURES AND AFFIDAVIT. Each bid must be signed in ink by the person or authorized officer or member of the firm or corporation making the bid.
- 5. FILING BIDS. All bids shall be filed with the County Commissioners on or before the day and hour mentioned above, and stated in the advertisement. No proposal presented after this time will be accepted.
- 6. ESTIMATED QUANTITIES. Wherever quantities are listed, given or shown, they are the quantities estimated to be required to complete the work shown on the drawings and/or required by the specifications. Although these quantities are intended to be correct, they are not guaranteed to be so. Before using said list of quantities the contractor shall determine to his own satisfaction that they are correct and he shall not be entitled to any claim of loss because of his failure to do so. Changes in quantities due to any changes in the plans and specifications ordered by the Owner or to correction of errors in said drawings and specifications will be covered by change orders to this contract.
- 7. BONDS. The successful bidder, at the time of signing the contract will be required to furnish a performance bond for 100% of the bid amount.
- 8. EXAMINATION OF LOCATION AND PLANS. Plans are available at the office of the County \_\_\_\_\_\_, and bidders are expected to examine them before submitting their bids. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may choose, as to the accuracy of the estimates of the work to be done, and shall not at any time after the opening of the bids dispute or complain of the statement or estimate of the Engineer, nor assert that there was misunderstanding as to the nature or amount of the work to be done.

- 9. COMMENCING WORK. The work, under these specifications shall be commenced within \_\_\_\_\_ days from the date of award of contract and shall be completed and ready for final inspection within days after award of the contract.
- 10. COMPLIANCE WITH PROVISIONS. All bids failing to comply with the provisions set forth herein may be rejected by the Owner.

#### **SPECIFICATIONS**

for

#### VICTOR PIKE BRIDGE

#### MONROE COUNTY

- 1. Indiana State Highway Department specifications are made a part hereof by reference hereto and shall take precedence over all others in so far as they pertain to materials and methods of construction; however, they shall not pertain to this job in so far as payment is concerned.
- 2. Bridge Decks to be furnished by Contractor shall be constructed of prestressed beams as shown by the drawings designed to support H 20 S 1644 AASHO LOADING in accordance with Recommendations for Prestressed Concrete by the ACI-ASCE Joint Committee #323.
- 3. FOUNDATIONS of abutments shall be constructed at elevations shown on plans. Concrete classes called for are 1963 Indiana State Highway Specifications, Section E5.
- 4. GUARD RAIL shall be 10 gauge beam type and shall come with a shop coat of red lead paint, and shall be furnished and erected by Contractor.
- 5. County to provide a wearing surface on new structure and perform any other roadway work required.
- 6. Removal of old structure to be done by Contractor. Plans indicate method and place of disposal.
- 7. Bituminous expansion joint shall be constructed at places as shown on the plans. No direct payment will be made for this item, but the cost thereof shall be included in the price of the prestressed concrete deck.
- 8. Payment for all excavating will not be made as such, but will be included in the payment for concrete.
- 9. Payment for piling, when required, will be based on actual footage using the unit price bid.

# NON COLLUSION AFFIDAVIT

sworn, on their oaths say that need in any way, directly or indirectly agreements with any other bidder, whereby such affiant or affiants to pay such bidder or public officor is to give to such other bidder value whatever, or such affiant on not directly or indirectly entere with any other bidder or bidders, destroy free competition in the 1 the attached bids; that no induce than that which appears upon the offered, paid or delivered to any acceptance of said bid or awarding	me of filing this bid, being duly either they nor any of them have y, entered into any agreement or or with any public official. or either of them, has paid or is cial any sum of money, or has given or public official anything of or affiants or either of them has d into any agreement or arrangement which tends to or does lessen or etting of the Contract sought for ment of any form or character other face of the bid will be suggested, person whomsoever to influence the g of the Contract; nor has this ding of any kind whatsoever, with iver to, or share with any other
· · · · · · · · · · · · · · · · · · ·	·
Subscribed and sworn to before me	by
this day of	, 1964.
	Notary Public
My commission expires	

#### PROPOSAL FORM

Pursuant to notice given, the undersigned proposes to perform and guarantee all things required to be performed or guaranteed to furnish all labor, and to furnish all materials and equipment except as otherwise provided, and do all other things necessary to complete the work required for the construction of Victor Pike Bridge in accordance with the plans and specifications on file in the office of the county engineer.

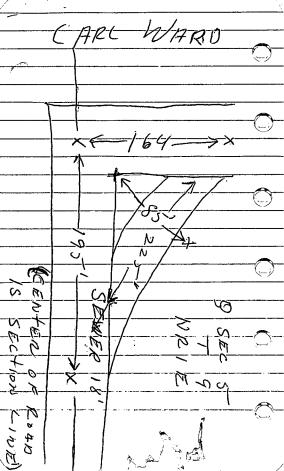
Each proposal shall contain a 96A Form with unit prices listed thereon as indicated below. Unit prices shall be inserted in the proper spaces provided therefore and extension shall be made by multiplying said unit price by the estimated quantities listed on the form to get a cost for each constructed item. The costs of the several construction items shall be totaled to obtain a lump sum bid for the work covered. All figures must be entered in type or ink.

- 1. Prestressed concrete bridge deck in place: 1 span @ 48'-0" including dowels, tie rods, grout and curbs.
- 2. Steel beam guard rail.
- 3. Class F Concrete
- 4. Reinforcing Steel
- 5. Removal of old structure.

QUANTITY	UNIT	Unit Price	Total Price
1	Lump Sum	6.50 Ber 59.Ft.	8190.00
96	Lin. Ft.	4.50	432.00
58.7	Cu. Yds.	80. <sup>60</sup>	√69, <u>60</u>
7,170	Pounds	0.15	1075,50
1 # Washington	Lump Sum	1000.52	1000

TOTAL	11167.10
10 /o contingency	1117.00
	12284.10
	10% contingency





John T. Stapheton

SPECIFICATIONS AND PROPOSAL

MONROE COUNTY BRIDGES

John T. Stapelton County Engineer

1.	Sealed	proposal	s for	the	following	described	work v	vill b	e rece	ived by
		Commissi				County,				•
		rt House				_ o'clock			- <b>26</b> °	,1964,
at '	which pi	lace and	hour t	hey	will be pu	blicly ope	ened ar	ıd rea	d.	

- 2. BIDS. A mit price shall be submitted for each item as set out in the proposal. Each bid must be accompanied with a Certified Check or Bic Bond for 10% of the total amount.
- 3. RIGHT TO REJECT BIDS. The Board expressly reserves the right to reject any and/or all bids.
- 4. <u>SIGNATURES AND AFFIDAVIT</u>. Each bid must be signed in ink by the person or authorized officer or member of the firm or corporation making the bid.
- 5. FILING BIDS. All bids shall be filed with the County Commissioners on or before the day and hour mentioned above, and stated in the advertisement. No proposal presented after this time will be accepted.
- 6. ESTIMATED QUANTITIES. Wherever quantities are listed, given or shown, they are the quantities estimated to be required to complete the work shown on the drawings and/or required by the specifications. Although these quantities are intended to be correct, they are not guaranteed to be so. Before using said list of quantities the contractor shall determine to his own satisfaction that they are correct and he shall not be entitled to any claim of loss because of his failure to do so. Changes in quantities due to any changes in the plans and specifications ordered by the Owner or to correction of errors in said drawings and specifications will be covered by change orders to this contract.
- 7. BONDS. The successful bidder, at the time of signing the contract will be required to furnish a performance bond for 100% of the bid amount.
- 8. EXAMINATION OF LOCATION AND PLANS. Plans are available at the office of the County \_\_\_\_\_\_, and bidders are expected to examine them before submitting their bids. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may choose, as to the accuracy of the estimates of the work to be done, and shall not at any time after the opening of the bids dispute or complain of the statement or estimate of the Engineer, nor assert that there was misunderstanding as to the nature or amount of the work to be done.

- 9. <u>COMMENCING WORK</u>. The work, under these specifications shall be commenced within \_\_\_\_\_ days from the date of award of contract and shall be completed and ready for final inspection within days after award of the contract.
- 10. <u>COMPLIANCE WITH PROVISIONS</u>. All bids failing to comply with the provisions set forth herein may be rejected by the Owner.

for

#### HARMONY ROAD BRIDGE

#### MONROE COUNTY

- 1. Indiana State Highway Department specifications are made a part hereof by reference hereto and shall take precedence over all others in so far as they pertain to materials and methods of construction; however, they shall not pertain to this job in so far as payment is concerned.
- 2. Bridge Decks to be furnished by Contractor shall be constructed of prestressed beams as shown by the drawings designed to support H 20 S 1644 AASHO LOADING in accordance with Recommendations for Prestressed Concrete by the ACI-ASCE Joint Committee #323.
- 3. FOUNDATIONS of abutments shall be constructed at elevations shown on plans. Concrete classes called for are 1963 Indiana State Highway Specifications, Section E5.
- 4. GUARD RAIL shall be 10 gauge beam type and shall come with a shop coat of red lead paint, and shall be furnished and erected by Contractor.
- 5. County to provide a wearing surface on new structure and perform any other roadway work required.
- 6. Removal of old structure to be done by Contractor. Plans indicate method and place of disposal.
- 7. Bituminous expansion joint shall be constructed at places as shown on the plans. No direct payment will be made for this item, but the cost thereof shall be included in the price of the prestressed concrete deck.
- 8. Payment for all excavating will not be made as such, but will be included in the payment for concrete.
- 9. Payment for piling, when required, will be based on actual footage using the unit price bid.
- 10. The skew angle shown on the plans shall be checked in the field by the Contractor and reported to the County Engineer.

# NON COLLUSION AFFIDAVIT

The Bidder, by its officers and	Agents.
representatives present at the time of	of filing this bid, being duly
sworn, on their oaths say that neithe	er they nor any of them have
in any way, directly or indirectly, o	entered into any agreement or
agreements with any other bidder, or	with any public official.
Whereby such affiant or affiants or e	either of them, has paid or is
to pay such bidder or public official	l any sum of money, or has given
or is to give to such other bidder or	r public official anything of
value whatever, or such affiant or at	criants or either of them has
not directly or indirectly entered in with any other bidder or bidders, who	ich tends to or does lessen or
destroy free competition in the letter	ing of the Contract sought for
the attached bids; that no inducement	t of any form or character other
than that which appears upon the face	e of the bid will be suggested.
offered, paid or delivered to any per	son whomsoever to influence the
acceptance of said bid or awarding of	t the Contract; nor has this
bidder any agreement or understanding any person whomsoever to pay, deliver	to or share with one other
person in any way or manner, any of the	the proceeds of the contract
sought by this bid.	
	•
<del></del>	
Subscribed and sworn to before me by	
•	
this day of	, 1964.
· ·	·
-	Notary Public
My commission expires	•

#### PROPOSAL FORM

Pursuant to notice given, the undersigned proposes to perform and guarantee all things required to be performed or guaranteed to furnish all labor, and to furnish all materials and equipment except as otherwise provided, and do all other things necessary to complete the work required for the construction of Harmony Rd. Bridge in accordance with the plans and specifications on file in the office of the county engineer.

Each proposal shall contain a 96A Form with unit prices listed thereon as indicated below. Unit prices shall be inserted in the proper spaces provided therefore and extension shall be made by multiplying said unit price by the estimated quantities listed on the form to get a cost for each constructed item. The costs of the several construction items shall be totaled to obtain a lump sum bid for the work covered. All figures must be entered in type or ink.

- 1. Prestressed concrete bridge deck in place: 1 span @42'-0" including dowels, tie rods, grout and curbs.
- 2. Steel beam guard rail.
- 3. Class F Concrete
- 4. Reinforcing Steel
- 5. Removal of old structure.

QUANTITY	UNIT	Unit Price	Total Price
			B
1	Lump Sum		724009
84	Lin. Ft.	4,50	378°
117.4	Cu. Yds.	8 90.≅1	10 566 50
13,374	Pounds	13 lt	1,738 62
1	Lump Sum		2,000

TOTAL 21,922 62

Signature\_\_\_\_\_

### SPECIFICATIONS AND PROPOSAL

MONROE COUNTY BRIDGES

John T. Stapelton County Engineer

- -1. Sealed proposals for the following described work will be received by the County Commissioners of Monroe County, Indiana at their office in the Court House until o'clock \_\_\_\_\_\_, of \_\_\_\_\_\_\_, at which place and hour they will be publicly opened and read.
- 2. <u>BIDS</u>: A unit price shall be submitted for each item as set out in the proposal. Each bid must be accompanied with a Certified Check or Bid Bond for 10% of the total amount.
- 3. <u>RIGHT TO REJECT BIDS</u>: The Board expressly reserves the right to reject any and/or all bids.
- 4. <u>SIGNATURES AND AFFIDAVIT</u>: Each bid must be signed in ink by the person or authorized officer or member of the firm or corporation making the bid.
- 5. <u>FILING BIDS</u>: All bids shall be filed with the County Commissioners on or before the day and hour mentioned above, and stated in the advertisement. No proposal presented after this time will be accepted.
- ESTIMATED QUANTITIES: Wherever quantities are listed, given or shown, they are the quantities estimated to be required to complete the work shown on the drawings and/or required by the specifications. Although these quantities are intended to be correct, they are not guaranteed to be so. Before using said list of quantities the contractor shall determine to his own satisfaction that they are correct and he shall not be entitled to any claim of loss because of his failure to do so. Changes in quantities due to any changes in the plans and specifications ordered by the Owner or to correction of errors in said drawings and specifications will be covered by change orders to this contract.
- 7. BONDS: The successful bidder, at the time of signing the contract, will be required to furnish a performance bond for 100% of the bid amount.
- C. EXAMINATION OF LOCATION AND PLANS: Plans are available at the office of the County Engineer, and bidders are expected to examine them before submitting their bids. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may choose, as to the accuracy of the estimates of the work to be done, and shall not at any time after the opening of the bids dispute or complain of the statement or estimate of the Engineer, nor assert that there was any misunderstanding as to the nature or amount of the work to be done.

- 9. <u>COMMENCING WORK</u>: The work, under these specifications shall be commenced within \_\_\_\_\_\_ days from the date of award of contract and shall be completed and ready for finel inspection within \_\_\_\_\_\_ days after award of the contract.
- 10. <u>COMPLAINCE WITH PROVISIONS</u>: All bids failing to comply with the provisions set forth herein may be rejected by the Owner.

for

#### VICTOR PIKE BRIDGE

#### MONROE COUNTY

- 1. Indiana State Highway Department specifications are made a part hereof by reference hereto and shall take precedence over all others in so far as they pertain to materials and methods of construction; however, they shall not pertain to this job in so far as payment is concerned.
- 2. Bridge Decks to be furnished by Contractor shall be constructed of prestressed beams as shown by the drawings designed to support H 20 S 1644 AASHO LOADING in accordance with Recommendations for Prestressed Concrete by the ACI-ASCE Joint Committee #323.
- 3. FOUNDATIONS of abutments shall be constructed at elevations shown on plans. Concrete classes called for are 1963 Indiana State Highway Specifications, Section E5.
- 4. GUARD RAIL shall be 10 gauge beam type and shall come with a shop coat of red lead paint, and shall be furnished and erected by Contractor.
- 5. County to provide a wearing surface on new structure and perform any other roadway work required.
- 6. Removal of old structure to be done by Contractor. Plans indicate method and place of disposal.
- 7. Bituminous expansion joint shall be constructed at places as shown on the plans. No direct payment will be made for this item, but the cost thereof shall be included in the price of the prestressed concrete deck.
- 8. Payment for all excavating will not be made as such, but will be included in the payment for concrete.
- 9. Payment for piling, when required, will be based on actual footage using the unit price bid.

#### NON-COLLUSION AFFIDAVIT

The Bidder, by its officers and Agents, representatives present at the time of filing this bid, being duly sworn, on their oaths say that neither they nor any of them have in any way, directly or indirectly, entered into any agreement or agreements with any other bidder, or with any public official. Whereby such affiant or affiants or either of them, has paid or is to pay to such bidder or public official any sum of money, or has given or is to give to such other bidder or public official anything of value whatever, or such affiant or affiants or either of them has not directly or indirectly entered into any agrement or arrangement with any other bidder or bidders, which tends to or does lessen or destroy free competition in the letting of the Contract sought for the attached bids; that no inducement of any form or character other than that which appears upon the face of the bid will be suggested, offered, paid or delivered to any person whomsoever to influence the acceptance of said bid or awarding of the Contract; nor has this bidder any agreement or understanding of any kind whatsoever, with any person whomsoever to pay deliver to, or share with any other person in any way or manner, any of the proceeds of the contract sought by this bid.

Suscribed	and	sworn	to	before	me	bÿ	
this	d	ay of_		·			, 19
My commiss	sion	expire	es:				

#### PROPOSAL FORM

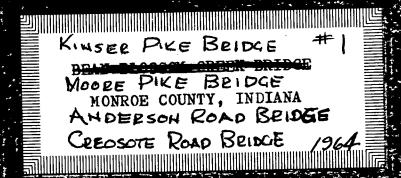
Pursuant to notice given, the undersigned proposes to perform and guarantee all things required to be performed or guaranteed to furnish all labor, and to furnish all materials and equipment except as otherwise provided, and do all other things necessary to complete the work required for the construction of Victor Pike Bridge in accordance with the plans and specifications on file in the office of the county engineer.

Each proposal shall contain a 96A Form with unit prices listed thereon as indicated below. Unit prices shall be inserted in the proper spaces provided therefore and extension shall be made by multiplying said unit price by the estimated quantities listed on the form to get a cost for each constructed item. The costs of the several construction items shall be totaled to obtain a lump sum bid for the work covered. All figures must be entered in type or ink.

- 1. Prestressed concrete bridge deck in place: 1 span @ 48'-0" including dowels, tie rods, grout and curbs.
- Steel beam guard rail.
- 3. Class F Concrete
- 4. Reinforcing Steel
- 5. Removal of old structure.

QUANTITY	UNIT	Unit Price	Total Price
1	Lump Sum	. 4.	
96	Lin. Ft.		
58.7	Cu. Yds.		()
7,170	Pounds		Ÿ
1	Lump Sum		

	TOTAL_	······································
Signature_	·	



# Moore's Pike START. 10 DAYS - FINISH IN 45 DAYS

SPECIFICATIONS AND PROPOSAL

MONROE COUNTY BRIDGES

John T. Stapleton County Engineer

- 2. <u>BIDS</u>: A unit price shall be submitted for each item as set out in the proposal. Each bid must be accompanied with a Certified Check or Bid Bond for 10% of the total amount.
- 3. <u>RIGHT TO REJECT BIDS</u>: The Board expressly reserves the right to reject any and/or all bids.
- 4. <u>SIGNATURES AND AFFIDAVIT</u>: Each bid must be signed in ink by the person or authorized officer or member of the firm or corporation making the bid.
- 5. <u>FILING BIDS</u>: All bids shall be filed with the County Commissioners on or before the day and hour mentioned above, and stated in the advertisement. No proposal presented after this time will be accepted.
- ESTIMATED QUANTITIES: Wherever quantities are listed, given or shown, they are the quantities estimated to be required to complete the work shown on the drawings and/or required by the specifications. Although these quantities are intended to be correct, they are not guaranteed to be so. Before using said list of quantities the contractor shall determine to his own satisfaction that they are correct and he shall not be entitled to any claim of loss because of his failure to do so. Changes in quantities due to any changes in the plans and specifications ordered by the Owner or to correction of errors in said drawings and specifications will be covered by change orders to this contract.
- 7. BONDS: The successful bidder, at the time of signing the contract, will be required to furnish a performance bond for 100% of the bid amount.
- 8. EXAMINATION OF LOCATION AND PLANS: Plans are available at the office of the County Engineer, and bidders are expected to examine them before submitting their bids. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may choose, as to the accuracy of the estimates of the work to be done, and shall not at any time after the opening of the bids dispute or complain of the statement or estimate of the Engineer, nor assert that there was any misunderstanding as to the nature or amount of the work to be done.

- 9. <u>COMMENCING WORK</u>: The work, under these specifications shall be commenced within \_\_\_\_\_\_ days from the date of award of contract and shall be completed and ready for finel inspection within \_\_\_\_\_\_ days after award of the contract.
- 10. <u>COMPLAINCE WITH PROVISIONS</u>: All bids failing to comply with the provisions set forth herein may be rejected by the Owner.

for

### MOORE'S PIKE BRIDGE

#### MONROE COUNTY, INDIANA

- 1. Indiana State Highway Department specifications are made a part hereof by reference hereto and shall take precedence over all others in so far as they pertain to materials and methods of construction; however, they shall not pertain to this job in so far as payment is concerned.
- 2. Bridge Decks to be furnished by Contractor shall be constructed of prestressed beams as shown by the drawings designed to support H 20 S 1644 AASHO LOADING in accordance with Recommendations for Prestressed Concrete by the ACI-ASCE Joint Committee #323.
- 3. FOUNDATIONS of abutments shall be constructed at elevations shown on plans. Concrete classes called for are 1963 Indiana State Highway Specifications, Section E5.
- 4. GUARD RAIL shall be 10 gauge beam type and shall come with a shop coat of red lead paint, and shall be furnished and crected by Contractor.
  - 5. County to provide a wearing surface on new structure and perform any other roadway work required.
  - 6. Removal of old structure to be done by Contractor. Plans indicate method and place of disposal.
- 7. Bituminous expansion joint shall be constructed at places as shown on the plans. No direct payment will be made for this item, but the cost thereof shall be included in the price of the prestressed concrete deck.
- 8. Payment for all excavating will not be made as such, but will be included in the payment for concrete.
- 9. Payment for piling, when required, will be based on actual footage using the unit price bid.
- 10. Permission to use explosives may be given, but must be approved by county engineer in writing.

# NON-COLLUSION AFFIDAVIT

The Bidder, by its officers and
Agents, representatives present at the time of filing
this tid, being duly sworn, on their oaths say that
neither they nor any of them have in any way, directly
or indirectly, entered into any agreement or agreements
with any other bidder, or with any public official.
Whereby such affiant or affiants or either of them, has
paid or is to pay to such bidder or public official any
sum of money, or has given or is to give to such other
bidder or public official anything of value whatever,
or such affiant or affiants or either of them has not
directly or indirectly entered into any agrement or
arrangement with any other bidder or bidders, which
tends to or does lessen or destroy free competition in
the letting of the Contract sought for the attached bids;
that no inducement of any form or character other than
that which appears upon the face of the bid will be sug-
gested, offered, paid or delivered to any person whomso-
ever to influence the acceptance of said bid or awarding
of the Contract; nor has this bidder any agreement or
understanding of any kind whatsoever, with any person
whomsoever to pay deliver to, or share with any other
person in any way or manner, any of the proceeds of the
contract sought by this bid.

Suscribed	and sworn	to before	e me by	·	
this	day of		<del></del>		19
My commiss	sion expire	<b>3</b> :			

#### PROPOSAL FORM

Pursuant to notice given, the undersigned proposes to perform and guarantee all things required to be performed or guaranteed to furnish all labor, and to furnish all materials and equipment except as otherwise provided, and do all other things necessary to complete the work required for the construction of Moore's Pike Bridge in accordance with the plans and specifications on file in the office of the county engineer.

Each proposal shall contain a 96A Form with unit prices listed thereon as indicated below. Unit prices shall be inserted in the proper spaces provided therefore and extension shall be made by multiplying said Unit Price by the estimated quantities listed on the form to get a cost for each constructed item. The costs of the several construction items shall be totaled to obtain a lump sum bid for the work covered. All figures must be entered in type or ink.

QUANTITY

1. Prestressed concrete bridge decliniplace: 1 span @ 24'-0" including	K g
bearing pads, dowels, tie rods, grout and curbs.	7

- Steel beam guard rail.
- 3. Class F Concrete
- 4. Reinforcing steel.
- 5. Removal of old structure.

	40	01177	OME	AL OUR COLOR
_			Price	Patrillo
↲				
3				
	1	Lump Sum		356600
	48	Lin.Ft.	600 ASA	288 <u>00</u>
	66.3	Cu.Yds.	Rogeria	5304:00
	7,320		Hault	102480
	1	Lump Sum		3000 00

UNIT

UNIT

TOT

	<b>B</b>	86
TOTAL		182

Signature	
-----------	--

North Kinser

SPECIFICATIONS AND PROPOSAL

MONROE COUNTY BRIDGES

9) fice Copy

John T. Stapleton County Engineer

- -1. Sealed proposals for the following described work will be received by the County Commissioners of Monroe County, Indiana at their office in the Court House until o'clock of 19, at which place and hour they will be publicly opened and read.
- 2. <u>BIDS</u>: A unit price shall be submitted for each item as set out in the proposal. Each bid must be accompanied with a Certified Check or Bid Bond for 10% of the total amount.
- 3. <u>RIGHT TO REJECT BIDS</u>: The Board expressly reserves the right to reject any and/or all bids.
- 4. <u>SIGNATURES AND AFFIDAVIT</u>: Each bid must be signed in ink by the person or authorized officer or member of the firm or corporation making the bid.
- 5. <u>FILING BIDS</u>: All bids shall be filed with the County Commissioners on or before the day and hour mentioned above, and stated in the advertisement. No proposal presented after this time will be accepted.
- i. ESTIMATED QUANTITIES: Wherever quantities are listed, given or shown, they are the quantities estimated to be required to complete the work shown on the drawings and/or required by the specifications. Although these quantities are intended to be correct, they are not guaranteed to be so. Before using said list of quantities the contractor shall determine to his own satisfaction that they are correct and he shall not be entitled to any claim of loss because of his failure to do so. Changes in quantities due to any changes in the plans and specifications ordered by the Owner or to correction of errors in said drawings and specifications will be covered by change orders to this contract.
- 7. BONDS: The successful bidder, at the time of signing the contract, will be required to furnish a performance bond for 100% of the bid amount.
- C. EXAMINATION OF LOCATION AND PLANS: Plans are available at the office of the County Engineer, and bidders are expected to examine them before submitting their bids. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may choose, as to the accuracy of the estimates of the work to be done, and shall not at any time after the opening of the bids dispute or complain of the statement or estimate of the Engineer, nor assert that there was any misunderstanding as to the nature or amount of the work to be done.

- 9. <u>COMMENCING WORK</u>: The work, under these specifications shall be commenced within \_\_\_\_\_\_ days from the date of award of contract and shall be completed and ready for finel inspection within \_\_\_\_\_\_ days after award of the contract.
- 10. <u>COMPLAINCE WITH PROVISIONS</u>: All bids failing to comply with the provisions set forth herein may be rejected by the Owner.

for

#### NORTH KINSER BRIDGE

#### MONROE COUNTY, INDIANA

- 1. Indiana State Highway Department specifications are made a part hereof by reference hereto and shall take precedence over all others in so far as they pertain to materials and methods of construction; however, they shall not pertain to this job in so far as payment is concerned.
- 2. Bridge Decks to be furnished by Contractor shall be constructed of prestressed beams as shown by the drawings designed to support H 20 S 1644 AASHO LOADING in accordance with Recommendations for Prestressed Concrete by the ACI-ASCE Joint Committee #323.
- 3. FOUNDATIONS of abutments shall be constructed at elevations shown on plans. Concrete classes called for are 1963 Indiana State Highway Specifications, Section E5.
- 4. GUARD RAIL shall be 10 gauge beam type and shall come with a shop coat of red lead paint, and shall be furnished and crected by Contractor.
- 5. County to provide a wearing surface on new structure and perform any other roadway work required.
- 6. Removal of old structure to be done by Contractor. Plans indicate method and place of disposal.
  - 7. Bituminous expansion joint shall be constructed at places as shown on the plans. No direct payment will be made for this item, but the cost thereof shall be included in the price of the prestressed concrete deck.
  - 8. Payment for all excavating will not be made as such, but will be included in the payment for concrete.
  - 9. Payment for piling, when required, will be based on actual footage using the unit price bid.
- 10. Permission to use explosives may be given, but must be approved by county engineer in writing.

# NON-COLLUSION AFFIDAVIT

The Bidder, by its officers and	Laboration .
Agents, representatives present at t	the time of filing
this bid, being duly sworn, on their	coaths say that
neither they nor any of them have in	any way, directly
or indirectly, entered into any agree	eement or agreements
with any other bidder, or with any	oublic official.
Whereby such affiant or affiants or	either of them, has
paid or is to pay to such bidder or	public official any
sum of money, or has given or is to	give to such other
bidder or public official anything of	of value whatever,
or such affiant or affiants or either	er of them has not
directly or indirectly entered into	any agrement or
arrangement with any other bidder or	bidders, which
tends to or does lessen or destroy f	ree competition in
the letting of the Contract sought f	for the attached bids;
that no inducement of any form or ch	aracter other than
that which appears upon the face of	the bid will be sug-
gested, offered, paid or delivered to	o any person whomso-
ever to influence the acceptance of	said bid or awarding
of the Contract; nor has this bidder	any agreement or
understanding of any kind whatsoever	, with any person
whomsoever to pay deliver to, or sha	re with any other
person in any way or manner, any of	the proceeds of the
contract sought by this bid.	

Suscribed and sworn to before me by _	
thisday of	, 19
My commission expires:	

#### PROPOSAL FORM

Pursuant to notice given, the undersigned proposes to perform and guarantee all things required to be performed or guaranteed to furnish all labor, and to furnish all materials and equipment except as officer wise provided, and do all other things necessary to complete the word required for the construction of North Kinser Bridge in accordance with the plans and specifications on file in the office of the county engineer.

Each proposal shall contain a 96A Form with unit prices listed thereon as indicated below. Unit prices shall be inserted in the proper species provided therefor and extension shall be made by multiplying said with Price by the estimated quantities listed on the form to get a cost for each constructed item. The costs of the several construction items then shall be totaled to obtain a lump sum bid for the work covered. All figures must be entered in type or ink.

QUANTITY

Signature

BASE BID

in pla	ace:	1 span	@ 55 <b>'</b>	e bridg	d 1
	dowel			g bear: grout	

- 2. Steel beam guard rail.
- 3. Class F concrete.
- 4. Reinforcing steel.
- 5. Steel H piles furnished.
- 6. Steel H piles driven.
- 7. Removal of old structure

AT	.TFR	NΔ	TR

Deduct	\$		if	
county	Temoves	old	struc	ture.

		Prios	X 10 5 6 7
1	Lump Sum		20905.25
202	Lin.Ft.	600 MA	,
18.9	Cu.Yds.	مهی معروده	1701.00
2250	Lbs.	14 el-	31500
680	LineFte	5ºplf	3400,00
680	Lin.Et.	300 pa/1	2040.00
1	Lump Sum	ngo-nagadho mas us' m	3000.00

UNIT

UNIT

TANKE

# Creosote Road

SPECIFICATIONS AND PROPOSAL

MONROE COUNTY BRIDGES

O) fice Copy

John T. Stapleton County Engineer

- -1. Sealed proposals for the following described work will be received by the County Commissioners of Monroe County, Indiana at their office in the Court House until o'clock of 19, at which place and hour they will be publicly opened and read.
- 2. <u>BIDS</u>: A unit price shall be submitted for each item as set out in the proposal. Each bid must be accompanied with a Certified Check or Bid Bond for 10% of the total amount.
- 3. <u>RIGHT TO REJECT BIDS</u>: The Board expressly reserves the right to reject any and/or all bids.
- 4. <u>SIGNATURES AND AFFIDAVIT</u>: Each bid must be signed in ink by the person or authorized officer or member of the firm or corporation making the bid.
- 5. <u>FILING BIDS</u>: All bids shall be filed with the County Commissioners on or before the day and hour mentioned above, and stated in the advertisement. No proposal presented after this time will be accepted.
- given or shown, they are the quantities estimated to be required to complete the work shown on the drawings and/or required by the specifications. Although these quantities are intended to be correct, they are not guaranteed to be so. Before using said list of quantities the contractor shall determine to his own satisfaction that they are correct and he shall not be entitled to any claim of loss because of his failure to do so. Changes in quantities due to any changes in the plans and specifications ordered by the Owner or to correction of errors in said drawings and specifications will be covered by change orders to this contract.
- 7. BONDS: The successful bidder, at the time of signing the contract, will be required to furnish a performance bond for 100% of the bid amount.
- C. EXAMINATION OF LOCATION AND PLANS: Plans are available at the office of the County Engineer, and bidders are expected to examine them before submitting their bids. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may choose, as to the accuracy of the estimates of the work to be done, and shall not at any time after the opening of the bids dispute or complain of the statement or estimate of the Engineer, nor assert that there was any misunderstanding as to the nature or amount of the work to be done.

- 9. <u>COMMENCING WORK</u>: The work, under these specifications shall be commenced within \_\_\_\_\_\_ days from the date of award of contract and shall be completed and ready for finel inspection within \_\_\_\_\_\_ days after award of the contract.
- 10. <u>COMPLAINCE WITH PROVISIONS</u>: All bids failing to comply with the provisions set forth herein may be rejected by the Owner.

for

#### CREOSOTE ROAD BRIDGE

#### MONROE COUNTY, INDIANA

- 1. Indiana State Highway Department specifications are made a part hereof by reference hereto and shall take precedence over all others in so far as they pertain to materials and methods of construction; however, they shall not pertain to this job in so far as payment is concerned.
- 2. Bridge Decks to be furnished by Contractor shall be constructed of prestressed beams as shown by the drawings designed to support H 20 S 1644 AASHO LOADING in accordance with Recommendations for Prestressed Concrete by the ACI-ASCE Joint Committee #323.
  - 3. FOUNDATIONS of abutments shall be constructed at elevations shown on plans. Concrete classes called for are 1963 Indiana State Highway Specifications, Section E5.
- 4. GUARD RAIL shall be 10 gauge beam type and shall come with a shop coat of red lead paint, and shall be furnished and crected by Contractor.
  - 5. County to provide a wearing surface on new structure and perform any other roadway work required.
- 6. Removal of old structure to be done by Contractor. Plans indicate method and place of disposal.
  - 7. Bituminous expansion joint shall be constructed at places as shown on the plans. No direct payment will be made for this item, but the cost thereof shall be included in the price of the prestressed concrete deck.
  - 8. Payment for all excavating will not be made as such, but will be included in the payment for concrete.
  - 9. Payment for piling, when required, will be based on actual footage using the unit price bid.
- 10. Permission to use explosives may be given, but must be approved by county engineer in writing.

#### NON-COLLUSION AFFIDAVIT

The Bidder, by its officers and Agents, representatives present at the time of filing this bid, being duly sworn, on their oaths say that neither they nor any of them have in any way, directly or indirectly, entered into any agreement or agreements with any other bidder, or with any public official. Whereby such affiant or affiants or either of them, has paid or is to pay to such bidder or public official any sum of money, or has given or is to give to such other bidder or public official anything of value whatever, or such affiant or affiants or either of them has not directly or indirectly entered into any agrement or arrangement with any other bidder or bidders, which tends to or does lessen or destroy free competition in the letting of the Contract sought for the attached bids; that no inducement of any form or character other than that which appears upon the face of the bid will be suggested, offered, paid or delivered to any person whomsoever to influence the acceptance of said bid or awarding of the Contract; nor has this bidder any agreement or understanding of any kind whatsoever, with any person whomsoever to pay deliver to, or share with any other person in any way or manner, any of the proceeds of the contract sought by this bid.

Suscribed and sworn to before me by	
thisday of	, 19
My commission expires:	

#### PROPOSAL FORM

Pursuant to notice given, the undersigned proposes to perform and guarantee all things required to be performed or guaranteed to furnish all labor, and to furnish all materials and equipment except as otherwise provided, and do all other things necessary to complete the work required for the construction of Creosote Road Bridge in accordance with the plans and specifications on file in the office of the county engineer.

Each proposal shall contain a 96A Form with unit praces listed thereon as indicated below. Unit prices shall be inserted in the proper spaces provided therefor and extension shall be made by multiplying said Unit Price by the estimated quantities listed on the form to get a cost for each constructed item. The costs of the several construction items then shall be totaled to obtain a lump sum bid for the work covered. All figures must be entered in type or ink.

1. Prestressed concrete bridge deck in place: 1 span @ 44'-0" including bearing pads, dowels, tie rods,
grout and curbs.

- Steel beam guard rail.
- Class F concrete.
- Reinforcing steel.
- Removal of old structure.

	QUANTITY	UNIT	UNIT	TOTAL
			Price	Prico
K				
믝				
	11	Lump Sum		8808,87
	108	Lin.Ft.	600 MH	648,00
	1.6	Cu.Yds.	9000 ayul	144 106
	150	Lbs.	20.16	30,00
	1	Lump Sum		2700.00

TOTAL	12,330.87
Signature	•

# ANDRY SON ROAD

SPECIFICATIONS AND PROPOSAL

MONROE COUNTY BRIDGES

O) jice Copy

John T. Stapleton County Engineer

- -1. Sealed proposals for the following described work will be received by the County Commissioners of Monroe County, Indiana at their office in the Court House until o'clock \_\_\_\_\_\_, of \_\_\_\_\_\_\_, at which place and hour they will be publicly opened and read.
- 2. <u>BIDS</u>: A unit price shall be submitted for each item as set out in the proposal. Each bid must be accompanied with a Certified Check or Bid Bond for 10% of the total amount.
- 3. <u>RIGHT TO REJECT BIDS</u>: The Board expressly reserves the right to reject any and/or all bids.
- 4. <u>SIGNATURES AND AFFIDAVIT</u>: Each bid must be signed in ink by the person or authorized officer or member of the firm or corporation making the bid.
- 5. <u>FILING BIDS</u>: All bids shall be filed with the County Commissioners on or before the day and hour mentioned above, and stated in the advertisement. No proposal presented after this time will be accepted.
- ESTIMATED QUANTITIES: Wherever quantities are listed, given or shown, they are the quantities estimated to be required to complete the work shown on the drawings and/or required by the specifications. Although these quantities are intended to be correct, they are not guaranteed to be so. Before using said list of quantities the contractor shall determine to his own satisfaction that they are correct and he shall not be entitled to any claim of loss because of his failure to do so. Changes in quantities due to any changes in the plans and specifications ordered by the Owner or to correction of errors in said drawings and specifications will be covered by change orders to this contract.
- 7. BONDS: The successful bidder, at the time of signing the contract, will be required to furnish a performance bond for 100% of the bid amount.
- 8. EXAMINATION OF LOCATION AND PLANS: Plans are available at the office of the County Engineer, and bidders are expected to examine them before submitting their bids. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may choose, as to the accuracy of the estimates of the work to be done, and shall not at any time after the opening of the bids dispute or complain of the statement or estimate of the Engineer, nor assert that there was any misunderstanding as to the nature or amount of the work to be done.

- 9. <u>COMMENCING WORK</u>: The work, under these specifications shall be commenced within \_\_\_\_\_\_ days from the date of award of contract and shall be completed and ready for finel inspection within \_\_\_\_\_\_ days after award of the contract.
- 10. <u>COMPLAINCE WITH PROVISIONS</u>: All bids failing to comply with the provisions set forth herein may be rejected by the Owner.

for

#### ANDERSON ROAD BRIDGE

#### MONROE COUNTY, INDIANA

- 1. Indiana State Highway Department specifications are made a part hereof by reference hereto and shall take precedence over all others in so far as they pertain to materials and methods of construction; however, they shall not pertain to this job in so far as payment is concerned.
- 2. Bridge Decks to be furnished by Contractor shall be constructed of prestressed beams as shown by the drawings designed to support H 20 S 1644 AASHO LOADING in accordance with Recommendations for Prestressed Concrete by the ACI-ASCE Joint Committee #323.
- 3. FOUNDATIONS of abutments shall be constructed at elevations shown on plans. Concrete classes called for are 1963 Indiana State Highway Specifications, Section E5.
- 4. GUARD RAIL shall be 10 gauge beam type and shall come with a shop coat of red lead paint, and shall be furnished and crected by Contractor.
- 5. County to provide a wearing surface on new structure and perform any other roadway work required.
- 6. Removal of old structure to be done by Contractor. Plans indicate method and place of disposal.
  - 7. Bituminous expansion joint shall be constructed at places as shown on the plans. No direct payment will be made for this item, but the cost thereof shall be included in the price of the prestressed concrete deck.
  - 8. Payment for all excavating will not be made as such, but will be included in the payment for concrete.
  - 9. Payment for piling, when required, will be based on actual footage using the unit price bid.
  - 10. Permission to use explosives may be given, but must be approved by county engineer in writing.

#### NON-COLLUSION AFFIDAVIT

The Bidder, by its officers and Agents, representatives present at the time of filing this bid, being duly sworn, on their oaths say that neither they nor any of them have in any way, directly or indirectly, entered into any agreement or agreements with any other bidder, or with any public official. Whereby such affiant or affiants or either of them, has paid or is to pay to such bidder or public official any sum of money, or has given or is to give to such other bidder or public official anything of value whatever, or such affiant or affiants or either of them has not directly or indirectly entered into any agrement or arrangement with any other bidder or bidders, which tends to or does lessen or destroy free competition in the letting of the Contract sought for the attached bids; that no inducement of any form or character other than that which appears upon the face of the bid will be suggested, offered, paid or delivered to any person whomsoever to influence the acceptance of said bid or awarding of the Contract; nor has this bidder any agreement or understanding of any kind whatsoever, with any person whomsoever to pay deliver to, or share with any other person in any way or manner, any of the proceeds of the contract sought by this bid.

Suscribed and sworn to before me by	
thisday of	, 19
My commission expires:	

#### PROPOSAL FORM

Pursuant to notice given, the undersigned proposes to perform and guarantee all things required to be performed or guaranteed to furnish all labor, and to furnish all materials and equipment except as otherwise provided, and do all other things necessary to complete the work required for the construction of Anderson Road Bridge in accordance with the plans and specifications on file in the office of the county engineer.

Each proposal shall contain a 96A Form with unit prices listed thereon as indicated below. Unit prices shall be inserted in the proper spaces provided therefor and extension shall be made by multiplying said Unit Price by the estimated quantities listed on the form to get a cost for each constructed item. The costs of the several construction items then shall be totaled to obtain a lump sum bid for the work covered. All figures must be entered in type or ink.

OTTA NUTT TO

1. Prestressed concrete bridge deck
in place: 1 span @ 35'-0" including
bearing pads, dowels, tie rods,
grout and curbs.

- 2. Steel beam guard rail.
- 3. Class F concrete.
- 4. Reinforcing steel
  - 5. Steel H piles furnished.
  - 6. Steel H piles driven.
  - 7. Removal of old structure.

	QUANTITY	UNIT	ONLT	TOTAL
			Price	Price
┥				
ł				
ı	·			
-	1	Lump Sum		5540,39
ſ			. 60	
I	70	Lin.Ft.	600	420,00
I				
l	69.4	Cu.Yds.	802032	5552,00
I			,	
l	7,880	Lbs.	.14eb	103,20
ſ				
	400	Lin.Ft.	300 pyst	2000.00
I				
l	400	Lin.Ft.	300 MA	1200.00
ſ				
L	1	Lump Sum		200000
_		f.		-0
		47 ,	<u> </u>	37

TOTAL	17.815-59

Signature	
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## SPECIFICATIONS AND PROPOSAL

MONROE COUNTY BRIDGES

John T. Stapleton County Engineer

#### SPECIFICATIONS

for

#### ANDERSON ROAD BRIDGE

#### MONROE COUNTY, INDIANA

- 1. Indiana State Highway Department specifications are made a part hereof by reference hereto and shall take precedence over all others in so far as they pertain to materials and methods of construction; however, they shall not pertain to this job in so far as payment is concerned.
- 2. Bridge Decks to be furnished by Contractor shall be constructed of prestressed beams as shown by the drawings designed to support H 20 S 1644 AASHO LOADING in accordance with Recommendations for Prestressed Concrete by the ACI-ASCE Joint Committee #323.
- 3. FOUNDATIONS of abutments shall be constructed at elevations shown on plans. Concrete classes called for are 1963 Indiana State Highway Specifications, Section E5.
- 4. GUARD RAIL shall be 10 gauge beam type and shall come with a shop coat of red lead paint, and shall be furnished and crected by Contractor.
- 5. County to provide a wearing surface on new structure and perform any other roadway work required.
- 6. Removal of old structure to be done by Contractor. Plans indicate method and place of disposal.
- 7. Bituminous expansion joint shall be constructed at places as shown on the plans. No direct payment will be made for this item, but the cost thereof shall be included in the price of the prestressed concrete deck.
- 8. Payment for all excavating will not be made as such, but will be included in the payment for concrete.
- 9. Payment for piling, when required, will be based on actual footage using the unit price bid.
- 10. Permission to use explosives may be given, but must be approved by county engineer in writing.

#### NON-COLLUSION AFFIDAVIT

The Bidder, by its officers and Agents, representatives present at the time of filing this bid, being duly sworn, on their oaths say that neither they nor any of them have in any way, directly or indirectly, entered into any agreement or agreements with any other bidder, or with any public official. Whereby such affiant or affiants or either of them, has paid or is to pay to such bidder or public official any sum of money, or has given or is to give to such other bidder or public official anything of value whatever, or such affiant or affiants or either of them has not directly or indirectly entered into any agrement or arrangement with any other bidder or bidders, which tends to or does lessen or destroy free competition in the letting of the Contract sought for the attached bids; that no inducement of any form or character other than that which appears upon the face of the bid will be suggested, offered, paid or delivered to any person whomsoever to influence the acceptance of said bid or awarding ofthe Contract; nor has this bidder any agreement or understanding of any kind whatsoever, with any person whomsoever to pay deliver to, or share with any other person in any way or manner, any of the proceeds of the contract sought by this bid.

Suscribed and sworn to before me by		
thisday of	, 19	
My commission expires:	,	

#### PROPOSAL FORM

Pursuant to notice given, the undersigned proposes to perform and guarantee all things required to be performed or guaranteed to furnish all labor, and to furnish all materials and equipment except as otherwise provided, and do all other things necessary to complete the work required for the construction of Anderson Road Bridge in accordance with the plans and specifications on file in the office of the county engineer.

Each proposal shall contain a 96A Form with unit prices listed thereon as indicated below. Unit prices shall be inserted in the proper spaces provided therefor and extension shall be made by multiplying said Unit Price by the estimated quantities listed on the form to get a cost for each constructed item. The costs of the several construction items then shall be totaled to obtain a lump sum bid for the work covered. All figures must be entered in type or ink.

1. Prestressed concrete bridge deck
in place: 1 span @ 35'-0" including
bearing pads, dowels, tie rods,
grout and curbs.

- 2. Steel beam guard rail.
- 3. Class F concrete.
- 4. Reinforcing steel
- 5. Steel H piles furnished.
- 6. Steel H piles driven.
- 7. Removal of old structure.

QUANTITY	UNIT	UNIT Price	TOTAL Price
1	Lump Sum		
70	Lin.Ft.		
69,4	Cu.Yds.		
7,880	Lbs.		1
400	Lin.Ft.		
400	Lin.Ft.		•
1	Lump Sum		د


# CREOSOTE ROAD BRIDGE

SPECIFICATIONS AND PROPOSAL

MONROE COUNTY BRIDGES

John T. Stapleton County Engineer

#### INFORMATION FOR BIDDERS

- -1. Sealed proposals for the following described work will be received by the County Commissioners of Monroe County, Indiana at their office in the Court House until o'clock of 19, at which place and hour they will be publicly opened and read.
- 2. <u>BIDS</u>: A unit price shall be submitted for each item as set out in the proposal. Each bid must be accompanied with a Certified Check or Bid Bond for 10% of the total amount.
- 3. <u>RIGHT TO REJECT BIDS</u>: The Board expressly reserves the right to reject any and/or all bids.
- 4. <u>SIGNATURES AND AFFIDAVIT</u>: Each bid must be signed in ink by the person or authorized officer or member of the firm or corporation making the bid.
- 5. <u>FILING BIDS</u>: All bids shall be filed with the County Commissioners on or before the day and hour mentioned above, and stated in the advertisement. No proposal presented after this time will be accepted.
- iven or shown, they are the quantities estimated to be required to complete the work shown on the drawings and/or required by the specifications. Although these quantities are intended to be correct, they are not guaranteed to be so. Before using said list of quantities the contractor shall determine to his own satisfaction that they are correct and he shall not be entitled to any claim of loss because of his failure to do so. Changes in quantities due to any changes in the plans and specifications ordered by the Owner or to correction of errors in said drawings and specifications will be covered by change orders to this contract.
- 7. BONDS: The successful bidder, at the time of signing the contract, will be required to furnish a performance bond for 100% of the bid amount.
- C. EXAMINATION OF LOCATION AND PLANS: Plans are available at the office of the County Engineer, and bidders are expected to examine them before submitting their bids. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may choose, as to the accuracy of the estimates of the work to be done, and shall not at any time after the opening of the bids dispute or complain of the statement or estimate of the Engineer, nor assert that there was any misunderstanding as to the nature or amount of the work to be done.

- 9. <u>COMMENCING WORK</u>: The work, under these specifications shall be commenced within \_\_\_\_\_\_\_ days from the date of award of contract and shall be completed and ready for finel inspection within \_\_\_\_\_\_ days after award of the contract.
- 10. <u>COMPLAINCE WITH PROVISIONS</u>: All bids failing to comply with the provisions set forth herein may be rejected by the Owner.

#### SPECIFICATIONS

for

#### CREOSOTE ROAD BRIDGE

#### MONROE COUNTY, INDIANA

- 1. Indiana State Highway Department specifications are made a part hereof by reference hereto and shall take precedence over all others in so far as they pertain to materials and methods of construction; however, they shall not pertain to this job in so far as payment is concerned.
- 2. Bridge Decks to be furnished by Contractor shall be constructed of prestressed beams as shown by the drawings designed to support H 20 S 1644 AASHO LOADING in accordance with Recommendations for Prestressed Concrete by the ACI-ASCE Joint Committee #323.
- 3. FOUNDATIONS of abutments shall be constructed at elevations shown on plans. Concrete classes called for are 1963 Indiana State Highway Specifications, Section E5.
- 4. GUARD RAIL shall be 10 gauge beam type and shall come with a shop coat of red lead paint, and shall be furnished and crected by Contractor.
- 5. County to provide a wearing surface on new structure and perform any other roadway work required.
- 6. Removal of old structure to be done by Contractor. Plans indicate method and place of disposal.
- 7. Bituminous expansion joint shall be constructed at places as shown on the plans. No direct payment will be made for this item, but the cost thereof shall be included in the price of the prestressed concrete deck.
- 8. Payment for all excavating will not be made as such, but will be included in the payment for concrete.
- 9. Payment for piling, when required, will be based on actual footage using the unit price bid.
- 10. Permission to use explosives may be given, but must be approved by county engineer in writing.

## NON-COLLUSION AFFIDAVIT

The Bidder, by its officers and
Agents, representatives present at the time of filing
this bid, being duly sworn, on their oaths say that
neither they nor any of them have in any way, directly
or indirectly, entered into any agreement or agreements
with any other bidder, or with any public official.
Whereby such affiant or affiants or either of them, has
paid or is to pay to such bidder or public official any sum of money, or has given or is to give to such other
bidder or public official anything of value whatever,
or such affiant or affiants or either of them has not
directly or indirectly entered into any agrement or
arrangement with any other bidder or bidders, which
tends to or does lessen or destroy free competition in
the letting of the Contract sought for the attached bids:
that no inducement of any form or character other than
that which appears upon the face of the bid will be sug-
gested, offered, paid or delivered to any person whomso-
ever to influence the acceptance of said bid or awarding of the Contract; nor has this bidder any agreement or
understanding of any kind whatsoever, with any person
whomsoever to pay deliver to, or share with any other
person in any way or manner, any of the proceeds of the
contract sought by this bid.
•

Suscribed and sworn to before me by	
thisday of,	19
My commission expires:	

#### PROPOSAL FORM

Pursuant to notice given, the undersigned proposes to perform and guarantee all things required to be performed or guaranteed to furnish all labor, and to furnish all materials and equipment except as otherwise provided, and do all other things necessary to complete the work required for the construction of Creosote Road Bridge in accordance with the plans and specifications on file in the office of the county engineer.

Each proposal shall contain a 96A Form with unit prices listed thereon as indicated below. Unit prices shall be inserted in the proper spaces provided therefor and extension shall be made by multiplying said Unit Price by the estimated quantities listed on the form to get a cost for each constructed item. The costs of the several construction items then shall be totaled to obtain a lump sum bid for the work covered, All figures must be entered in type or ink.

1. Prestressed concrete bridge deck
in place: 1 span @ 44'-0" including
bearing pads, dowels, tie rods,
grout and curbs.

- 2. Steel beam guard rail.
- 3. Class F concrete.
- 4. Reinforcing steel.
- 5. Removal of old structure.

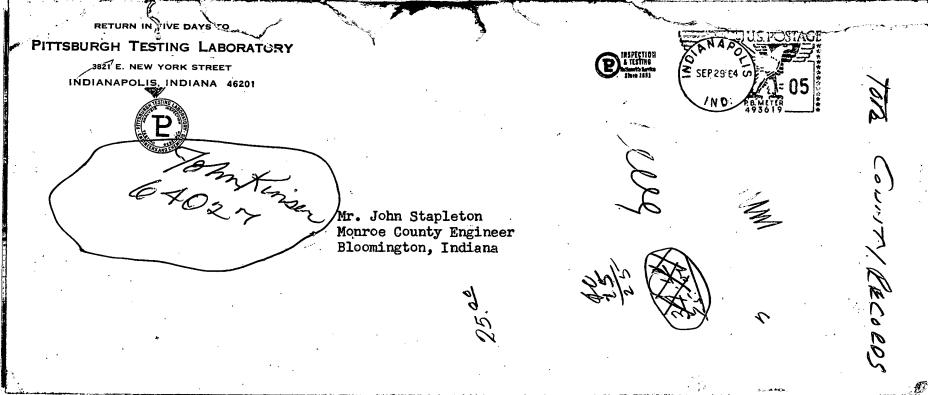
QUA	NITIX	UNIT	UNIT Price	ronal Price
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1.	6	Cu.Yds.		
15	50 ·	Lbs.		
1		Lump Sum		111

TOTAL	
Signa	ture

#### INFORMATION FOR BIDDERS

- -1. Sealed proposals for the following described work will be received by the County Commissioners of Monroe County, Indiana at their office in the Court House until o'clock of 19, at which place and hour they will be publicly opened and read.
- 2. <u>BIDS</u>: A unit price shall be submitted for each item as set out in the proposal. Each bid must be accompanied with a Certified Check or Bid Bond for 10% of the total amount.
- 3. <u>RIGHT TO REJECT BIDS</u>: The Board expressly reserves the right to reject any and/or all bids.
- 4. <u>SIGNATURES AND AFFIDAVIT</u>: Each bid must be signed in ink by the person or authorized officer or member of the firm or corporation making the bid.
- 5. <u>FILING BIDS</u>: All bids shall be filed with the County Commissioners on or before the day and hour mentioned above, and stated in the advertisement. No proposal presented after this time will be accepted.
- i. ESTIMATED QUANTITIES: Wherever quantities are listed, given or shown, they are the quantities estimated to be required to complete the work shown on the drawings and/or required by the specifications. Although these quantities are intended to be correct, they are not guaranteed to be so. Before using said list of quantities the contractor shall determine to his own satisfaction that they are correct and he shall not be entitled to any claim of loss because of his failure to do so. Changes in quantities due to any changes in the plans and specifications ordered by the Owner or to correction of errors in said drawings and specifications will be covered by change orders to this contract.
- 7. BONDS: The successful bidder, at the time of signing the contract, will be required to furnish a performance bond for 100% of the bid amount.
- 8. EXAMINATION OF LOCATION AND PLANS: Plans are available at the office of the County Engineer, and bidders are expected to examine them before submitting their bids. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may choose, as to the accuracy of the estimates of the work to be done, and shall not at any time after the opening of the bids dispute or complain of the statement or estimate of the Engineer, nor assert that there was any misunderstanding as to the nature or amount of the work to be done.

- 9. <u>COMMENCING WORK</u>: The work, under these specifications shall be commenced within <u>/C</u> days from the date of award of contract and shall be completed and ready for finel inspection within <u>45</u> days after award of the contract.
- 10. <u>COMPLAINCE WITH PROVISIONS</u>: All bids failing to comply with the provisions set forth herein may be rejected by the Owner.





# PITTSBURGH TESTING LABORATORY

3821 E. NEW YORK STREET., INDIANAPOLIS, IND. 46201

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Order No. IND-6973

FORM 9002-A-IND

Report No. 3

#### CONCRETE TEST REPORT

Client's No.

Date Moulded 8 Project <b>Kinser</b>	-29-64 Road Br	midra ovan P	Re Recorn		6-6L		,
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Concrete Supplier Quantity Represer		C. VJ- C-		Client	· <u>·</u>	N C I	itted 🏃
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Location of pour (	per intorn	narion from Job-:	sire)	CHISCARO IF E			
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Cement	lbs.		bags Type	Brand		т	
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Cyls. delivered to	laborato			or Er		Common Carri	er 🔲
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 Respectfully submitted,
PITTSBURGH TESTING LABORATORY

eorge P. Nolan District Manager



# PITTSBURGH TESTING LABORATORY

FORM 9002-A-IND

3821 E. NEW YORK STREET., INDIANAPOLIS, IND. 46201

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Order No. IND-6973

Report No. 3

#### CONCRETE TEST REPORT

Client's No.

Date Moulded	3-29-64		Rep	orted 9-26	ર્ગ્ન્ઇમ		:
Project Kinser	Road Br	idge over Be	an Bloosom				
At Bloomin	ngton, I	'adfana '	-				
Contractor Frank	C. Als						
Reported Seme,	Indiana	polis, India	ane				
Concrete Supplier	·						
Quantity Represe	nted	Cu. Yds. Spe	ecimens made b	_ Client		No. Subm	itted 🗓
Quantity Represe Location of pour	(per inform	nation from job-s	ite)Abut	ment #2	•		
Strength requirem	ent <u>C3</u>	ass F	psi at 28 do	rys Mix De	sign No.:		
•	MATE	RIAL PROPOR	TIONS USED (	Quantities per d	cubic yard of co	ncrete)	
Cement	lbs.	. <u> </u>	bags Type	Brand			
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Coarse Aggregate	: (SSD)	Ibs. S	ize	Source		Туре:	
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SPECIMEN MARKING	AGE DÂYS	LABORATORY NUMBER	DATE RECEIVED	DATE TESTED	TOTAL LOAD-POUNDS	UNIT LOAD – P.S.I.	REPORT NO.
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2cc: Client

2ce: Mr. John Stapleton

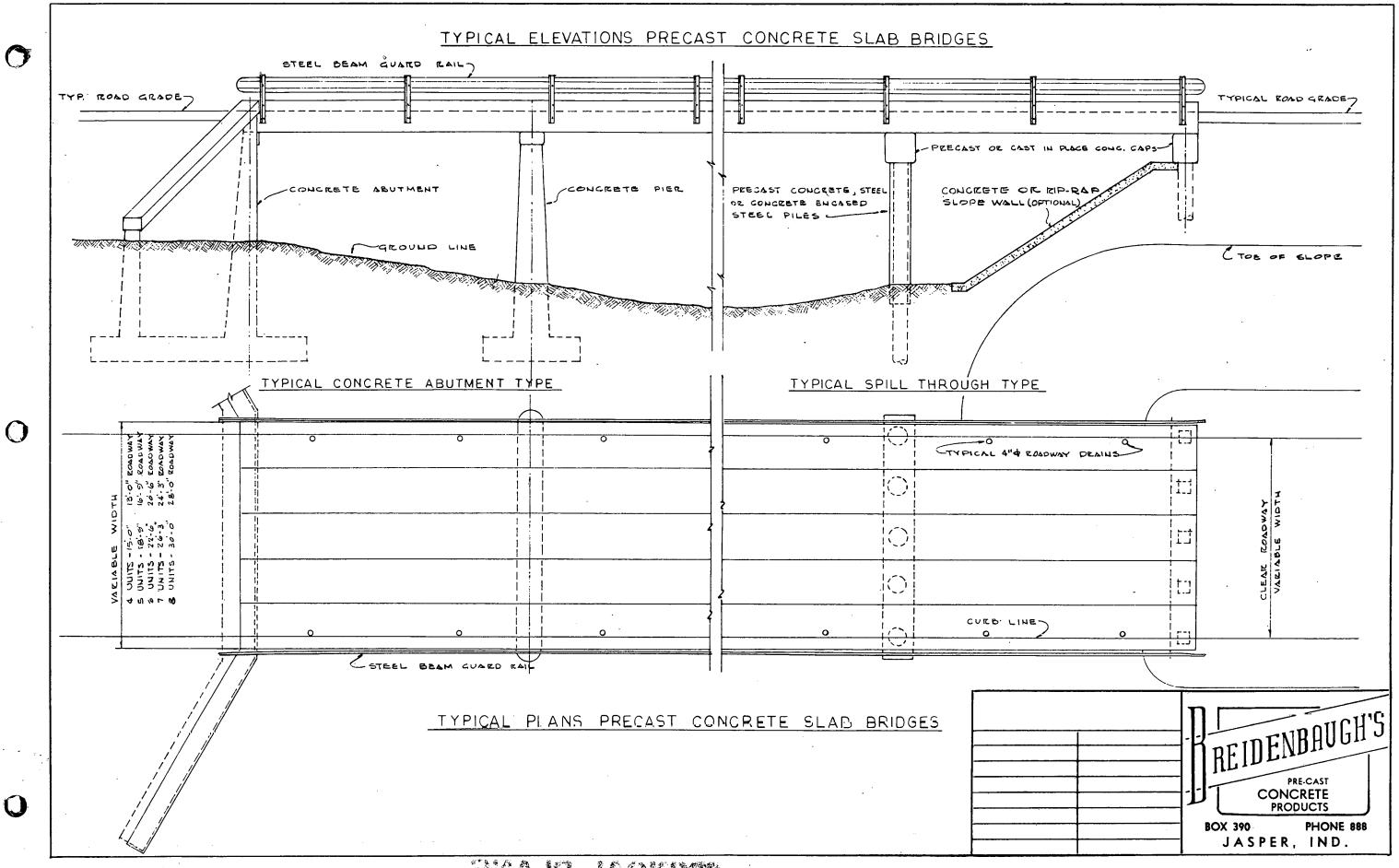
PITTSBURGH TESTING LABORATORY

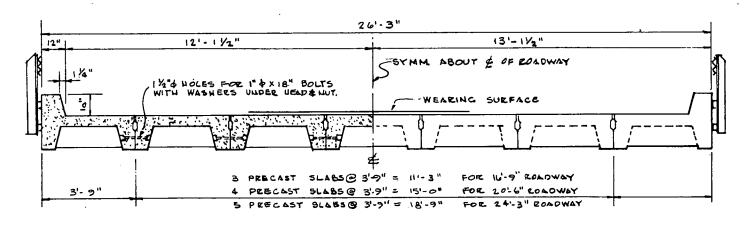
District Manager eorge P. Nolan



() TYPICAL ELEVATIONS PRECAST CONCRETE SLAB BRIDGES STEEL BEAM GUARD RAIL CTYP ROAD GRADE PIER CAP ---ABUTMBNT CAP CONCRETE OF RIP EL -TIMBER PILES & CAPS SLOPE WALL (OPTIONAL) -TOE OF SLOPE SHOULDER LINE TYPICAL SPILL THAOUGH TYPE TYPICAL TIMBER ABUTMENT TYPE CTYPICAL 4" PONDWAY DRAINS 4.UUITS 5.UNITS 6.UUITS 7.UNITS 8.UNITS CURB LINE-STEEL BEAM GUARD PAIL SHOULDER LINE-REIDENBAUGH'S TYPICAL PLANS PRECAST CONCRETE SLAB BRIDGES PRE-CAST CONCRETE **PRODUCTS** PHONE 888 **BOX 390** JASPER, IND.

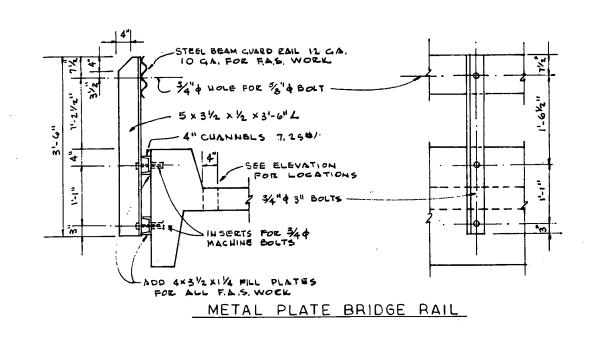
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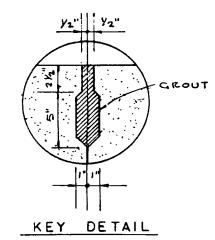




HALF SECTION

HALF ELEVATION



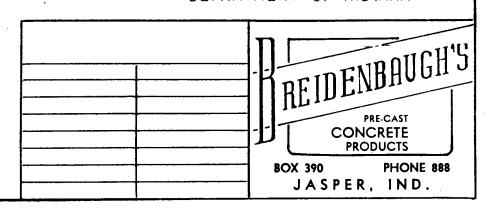


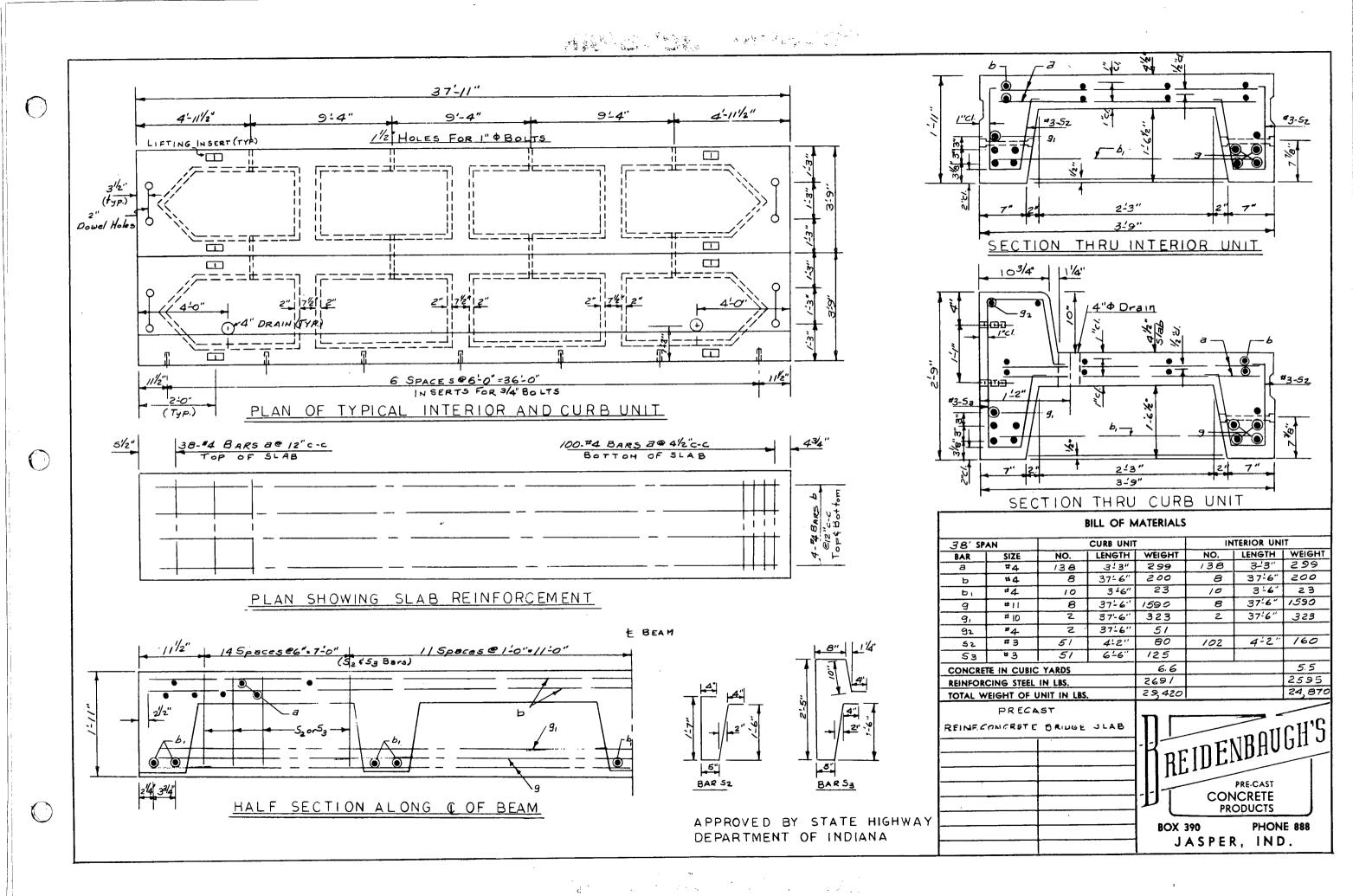
APPROVED BY STATE HIGHWAY DEPARTMENT OF INDIANA

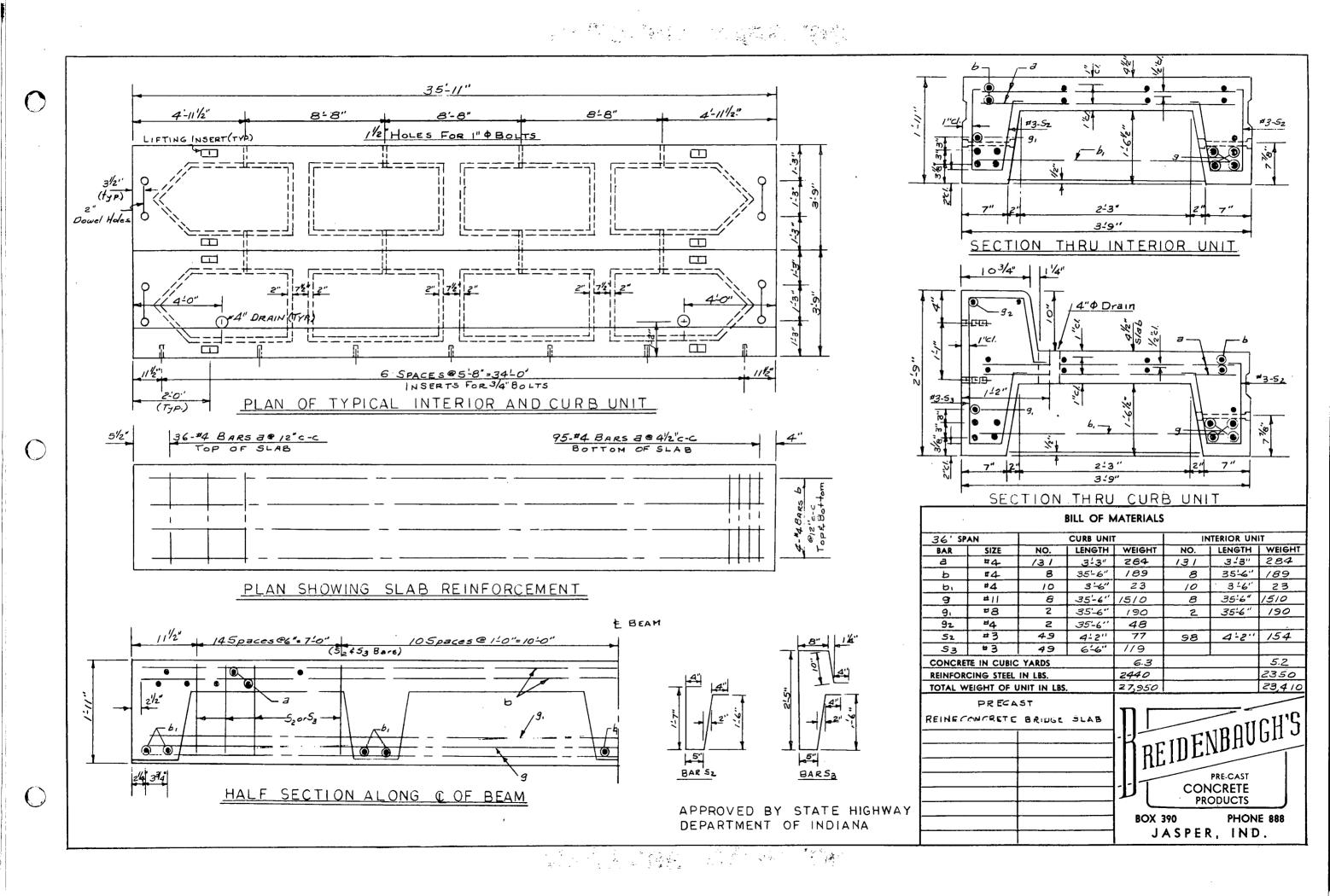
#### NOTE

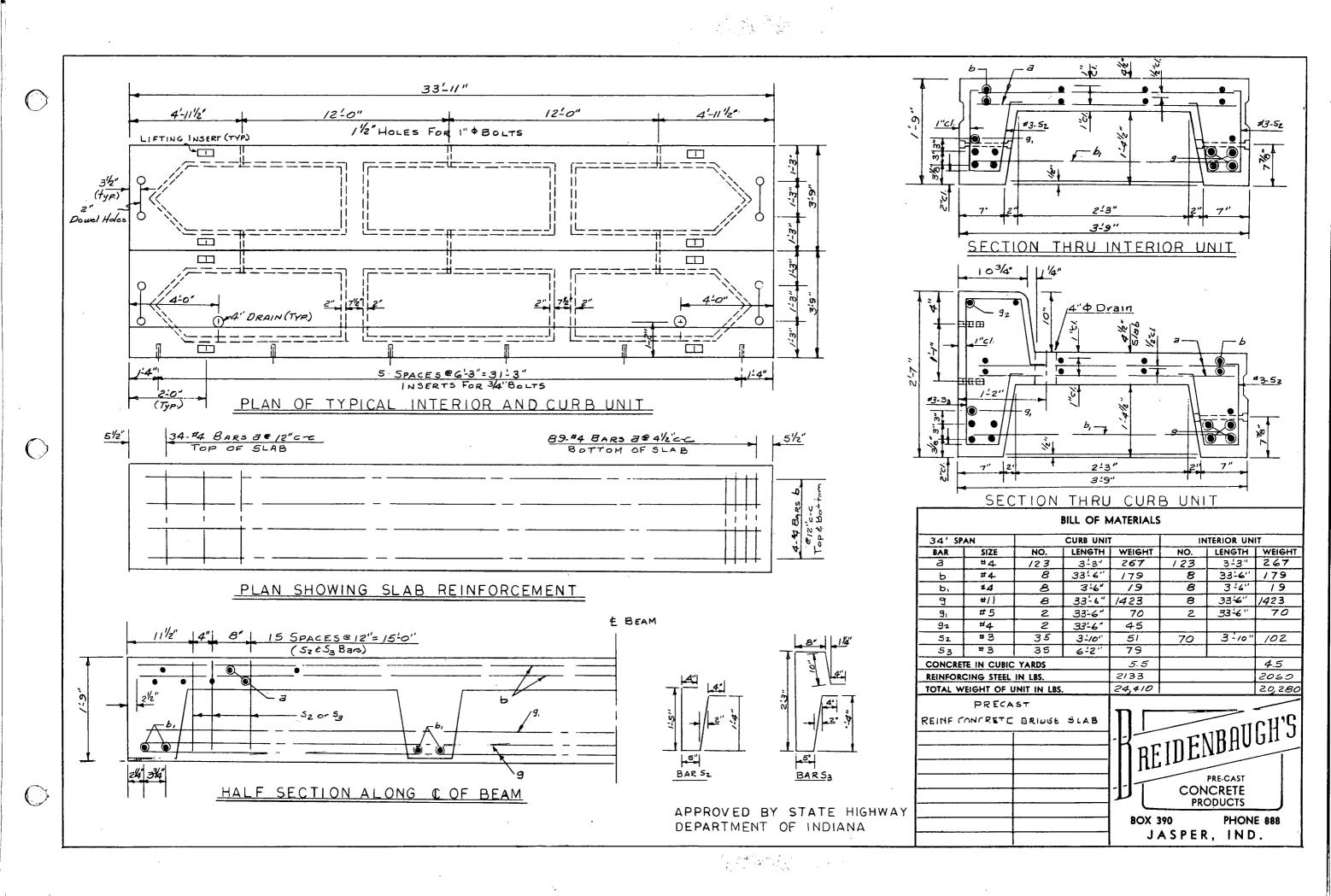
STRESSES. f'c = 4500PSI fc = 1800PSI fs = 20000PSI n = 8 SPECIAL CURBS, WALKS, & GUARD RAIL ARRANGMENTS, LOADING OTHER THAN H-20-SI6-44; AND ALL OTHER SKEWS ARE AVAILABLE UPON REQUEST.

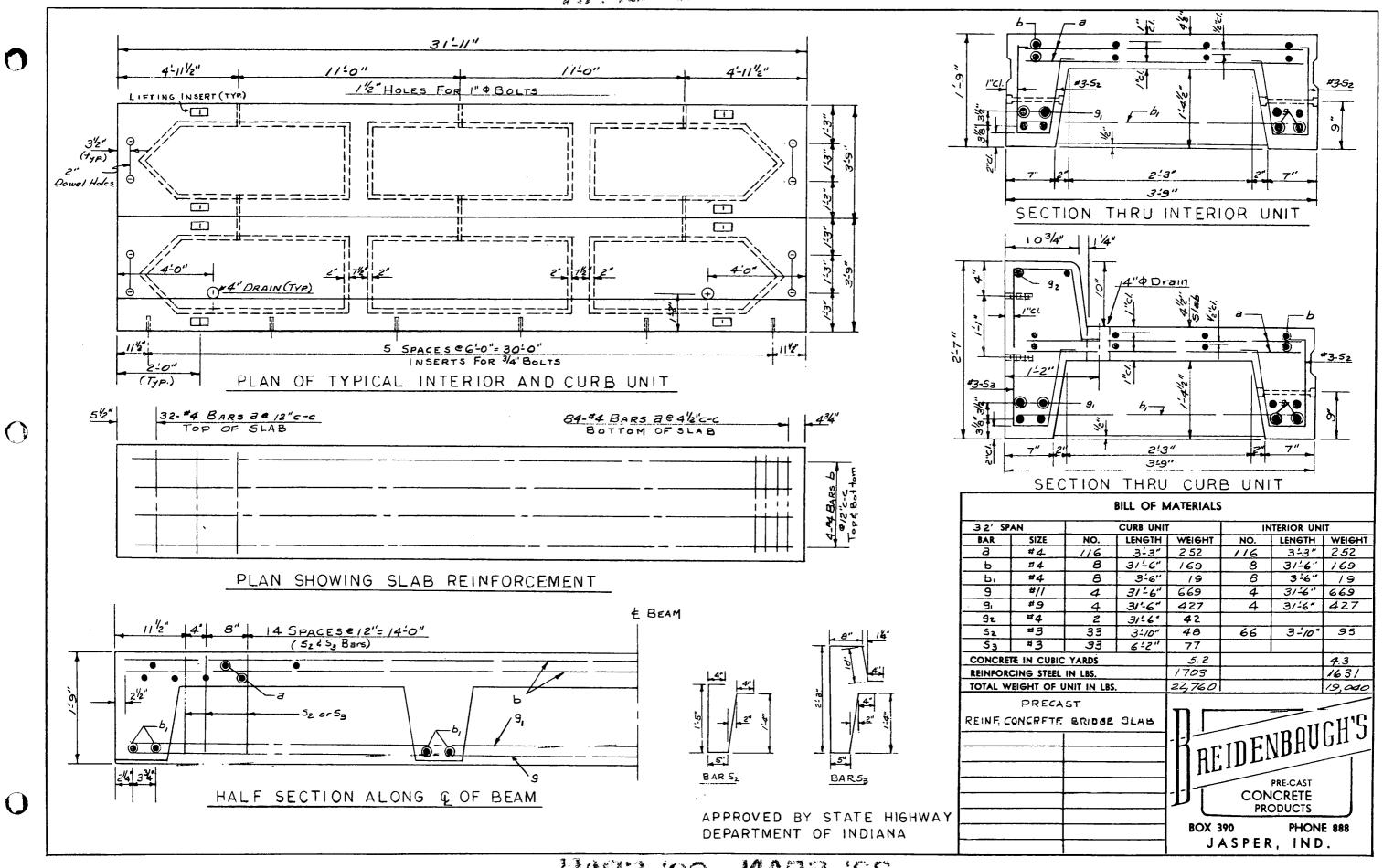
(REQUIRED ON F.A.S. WORK) WEARING SURFACE ON ROADWAY SHALL CONSIST OF A MINIMUM OF 2" AT CENTERLINE \$ 1" AT CURB OF HOT ASPHALTIC CONCRETE SURFACE TYPE "B", UNLESS OTHERWISE SPECIFIED.



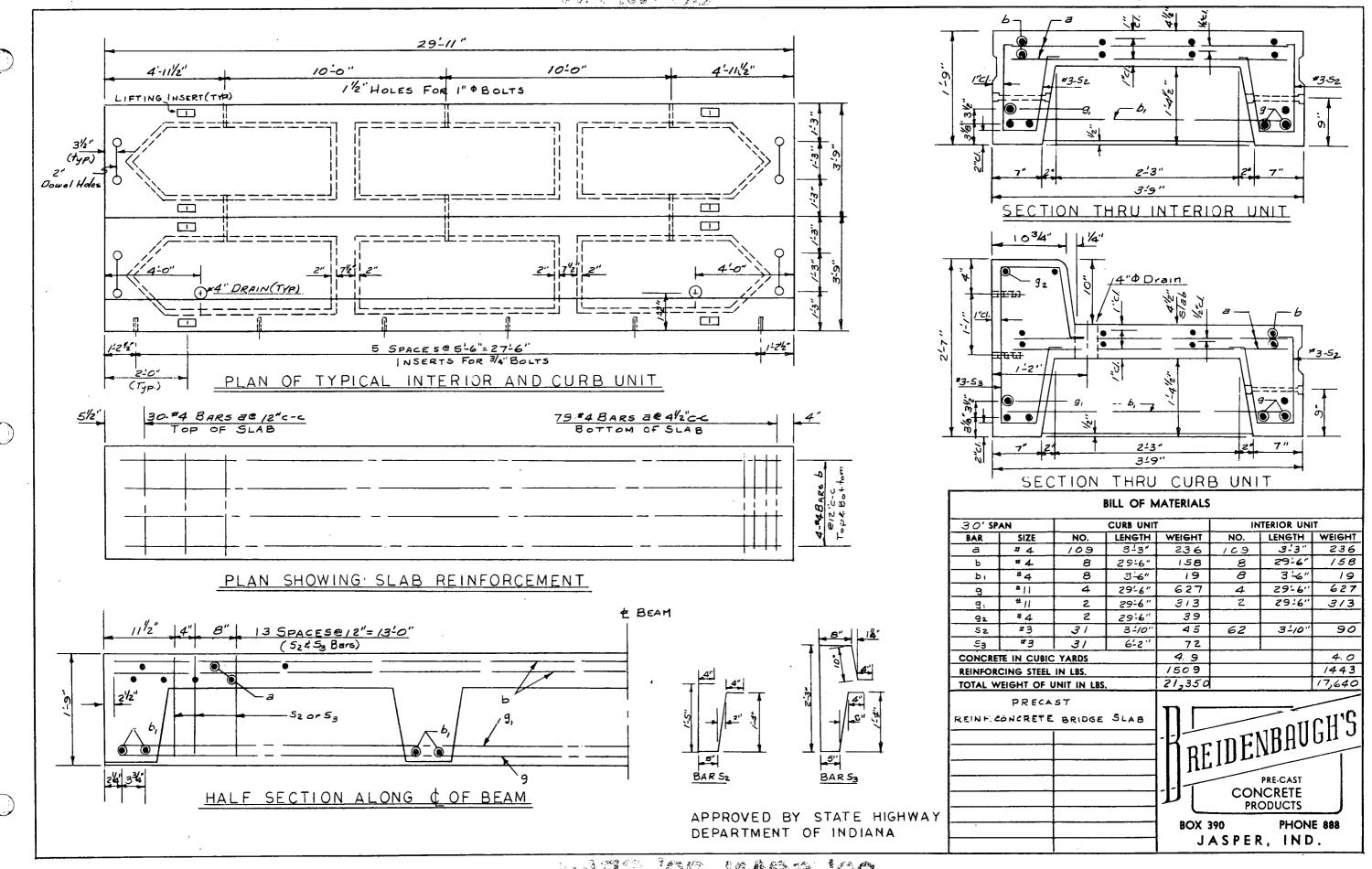




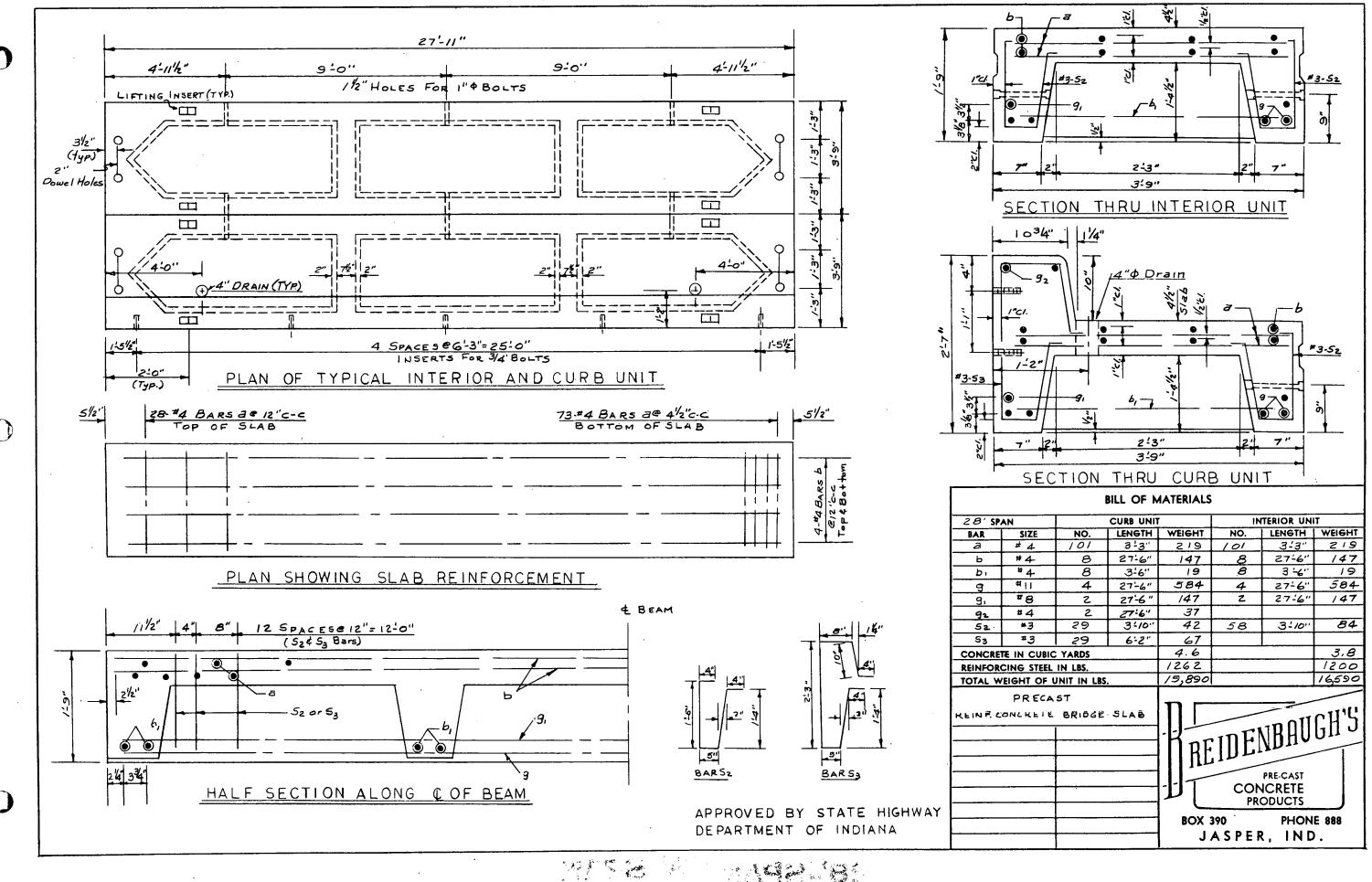




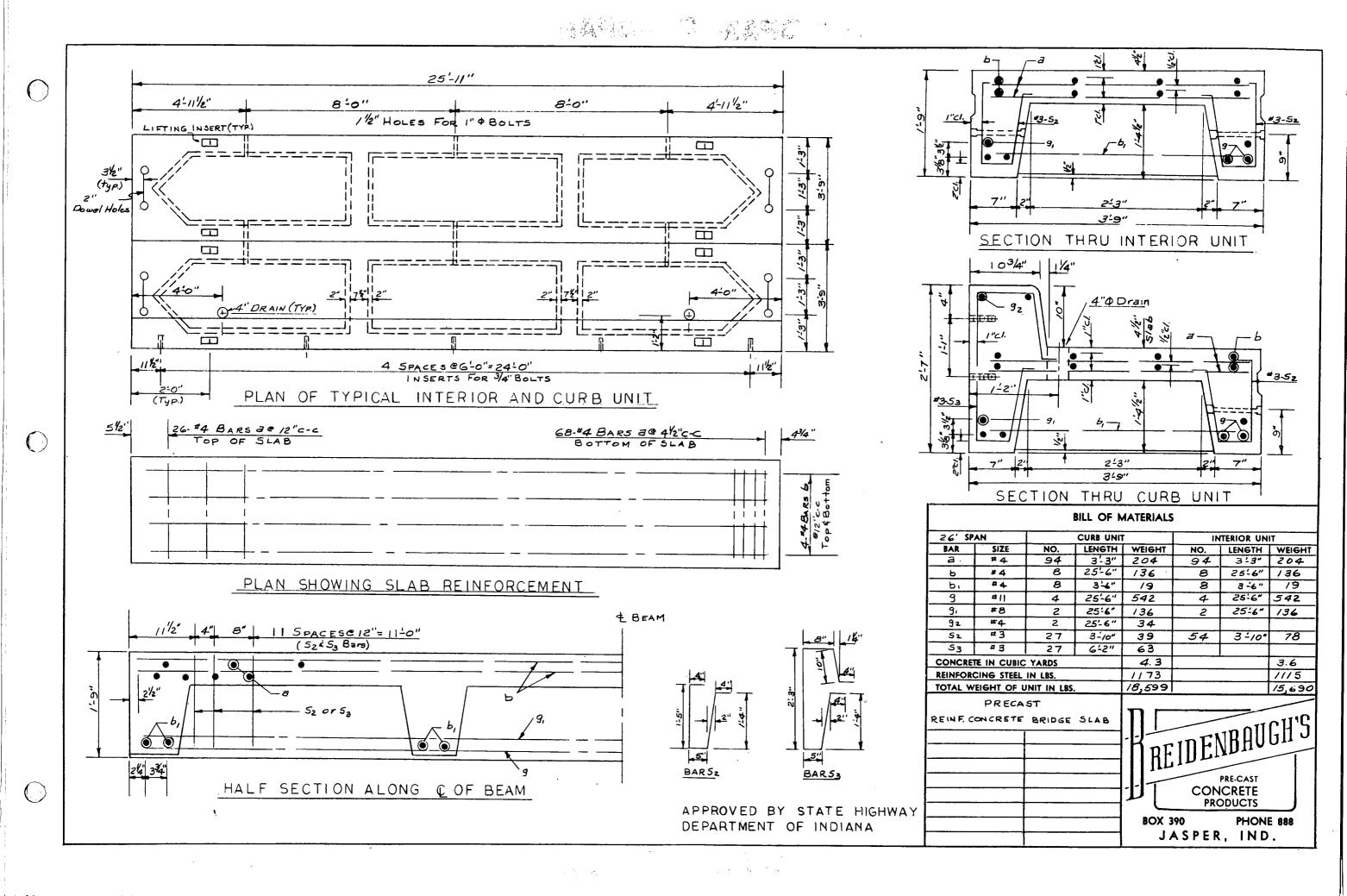
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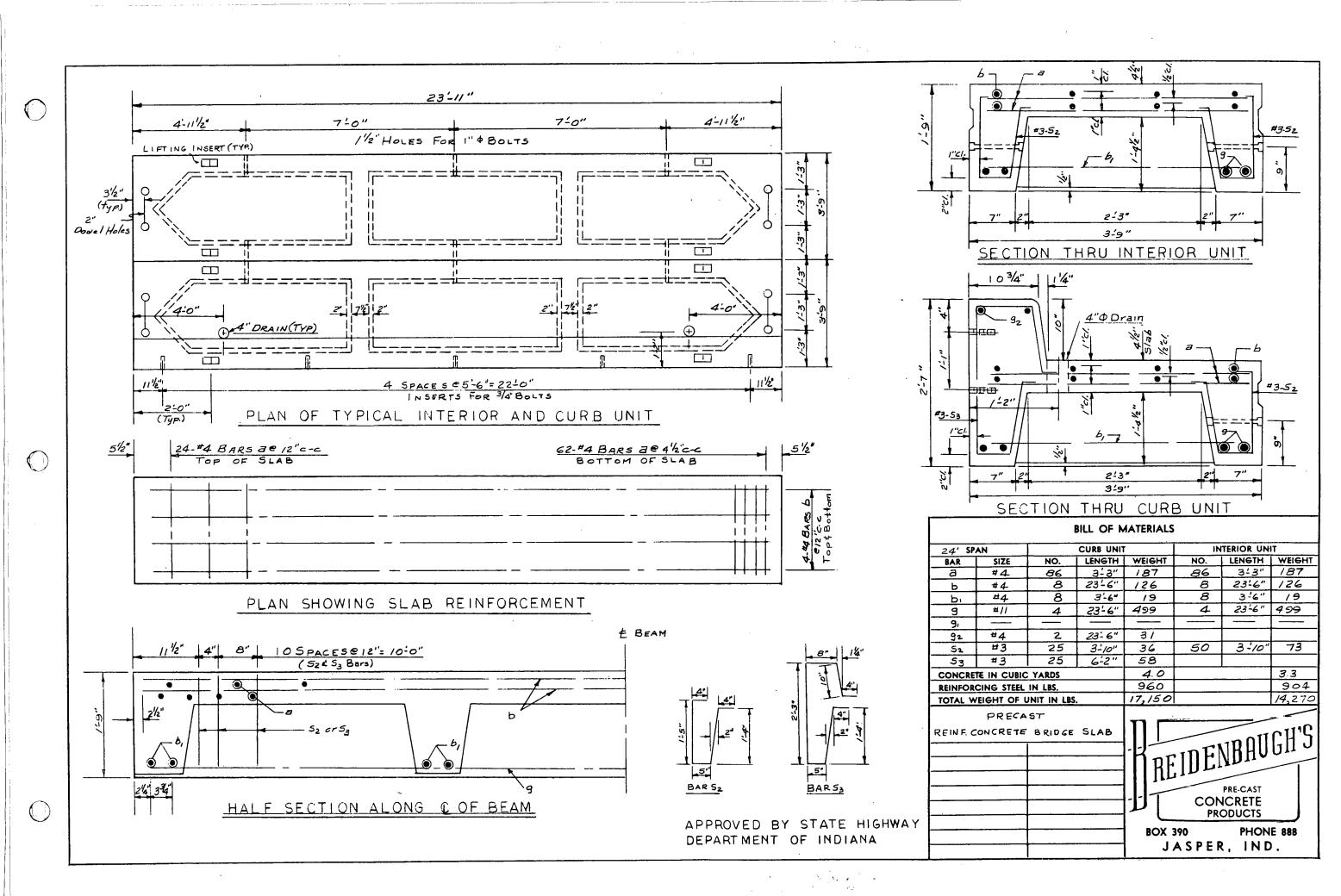


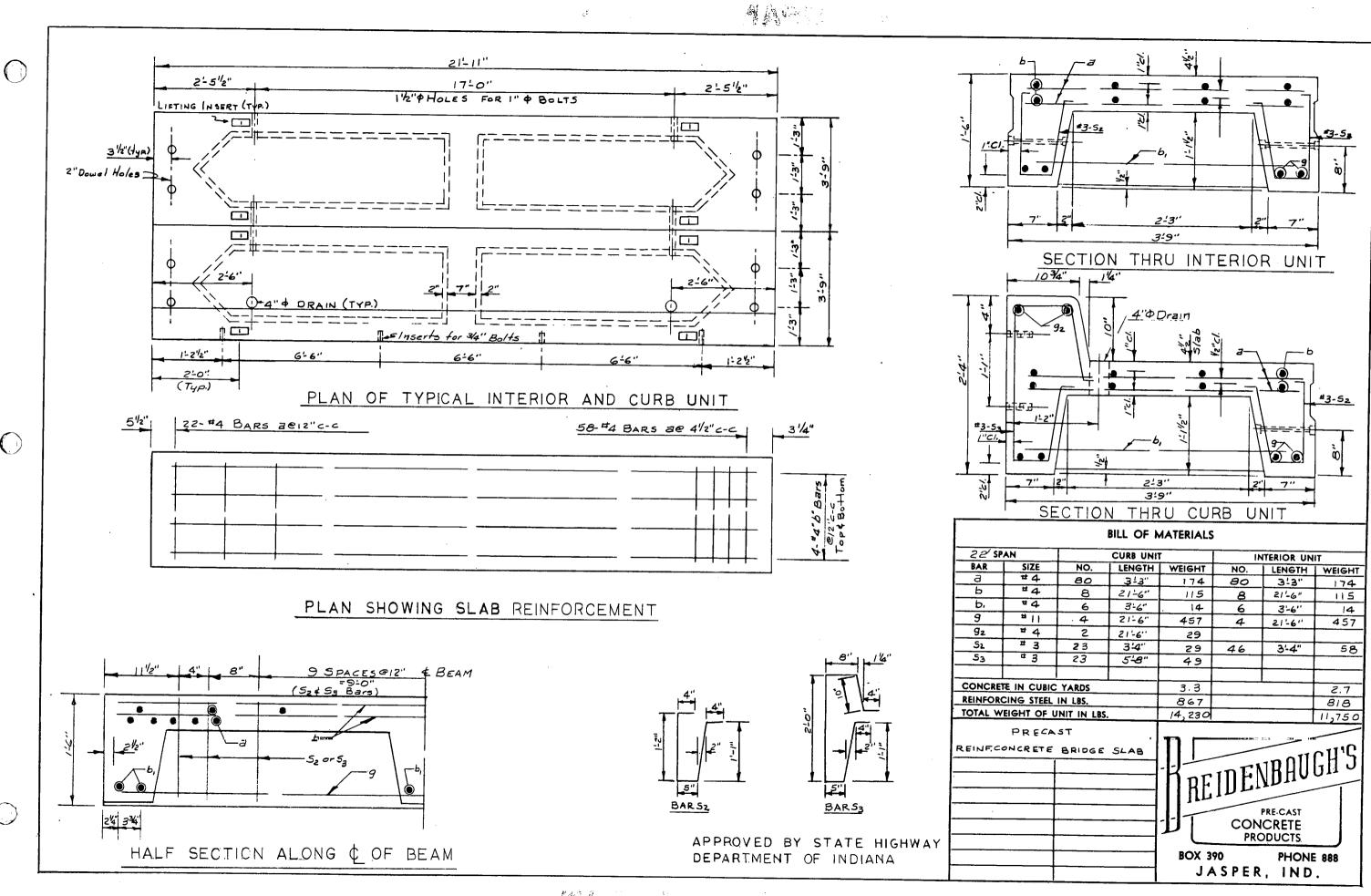
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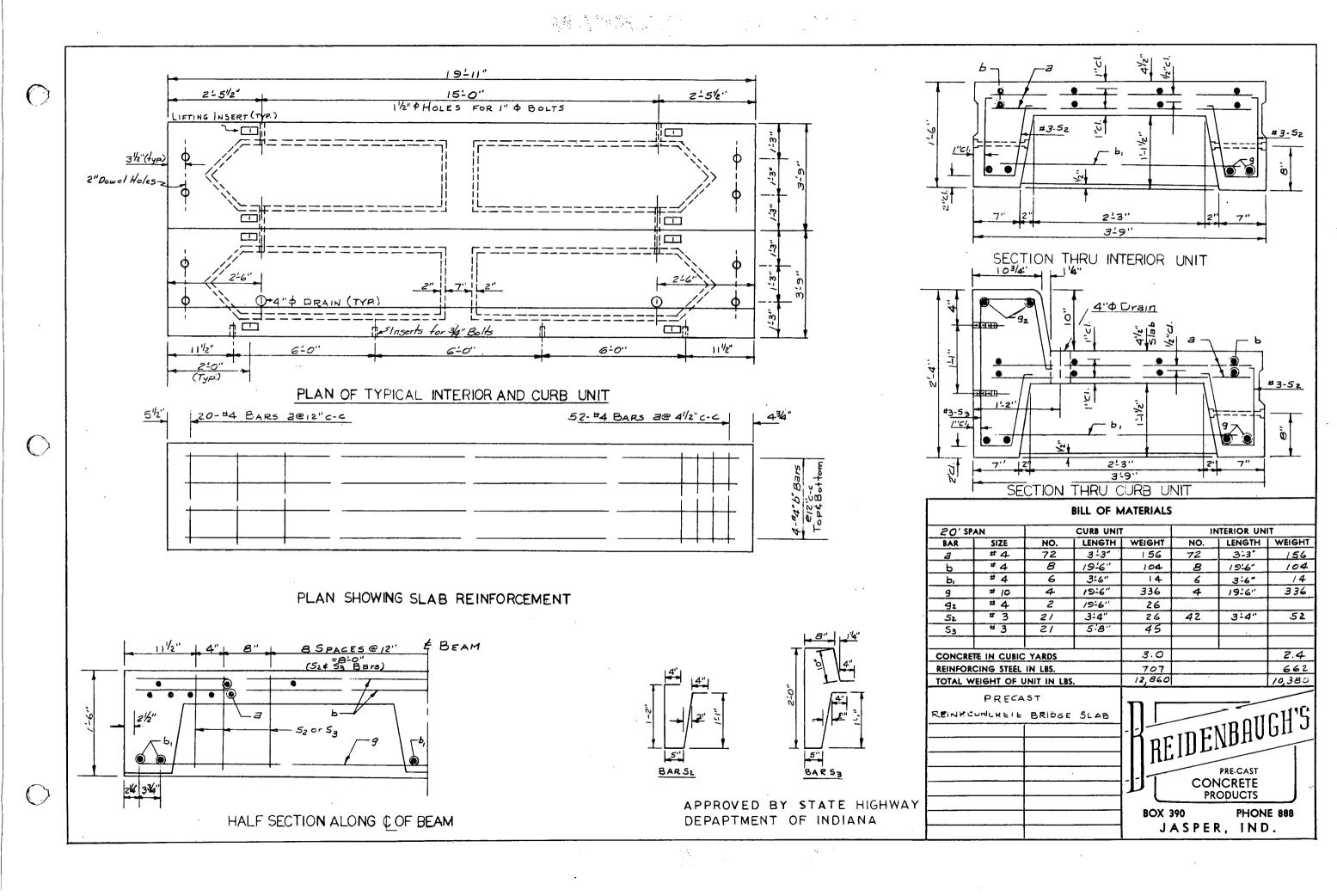


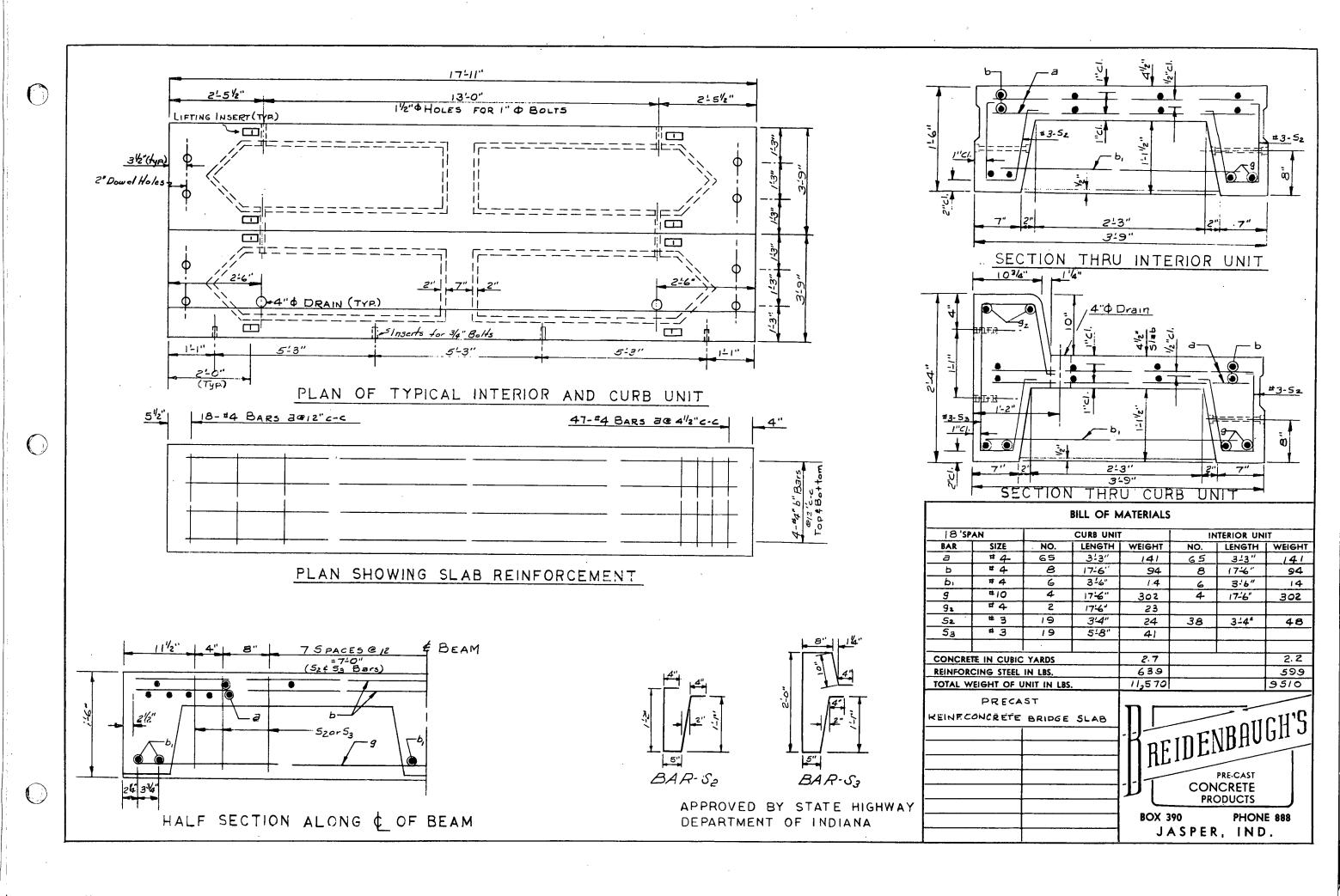
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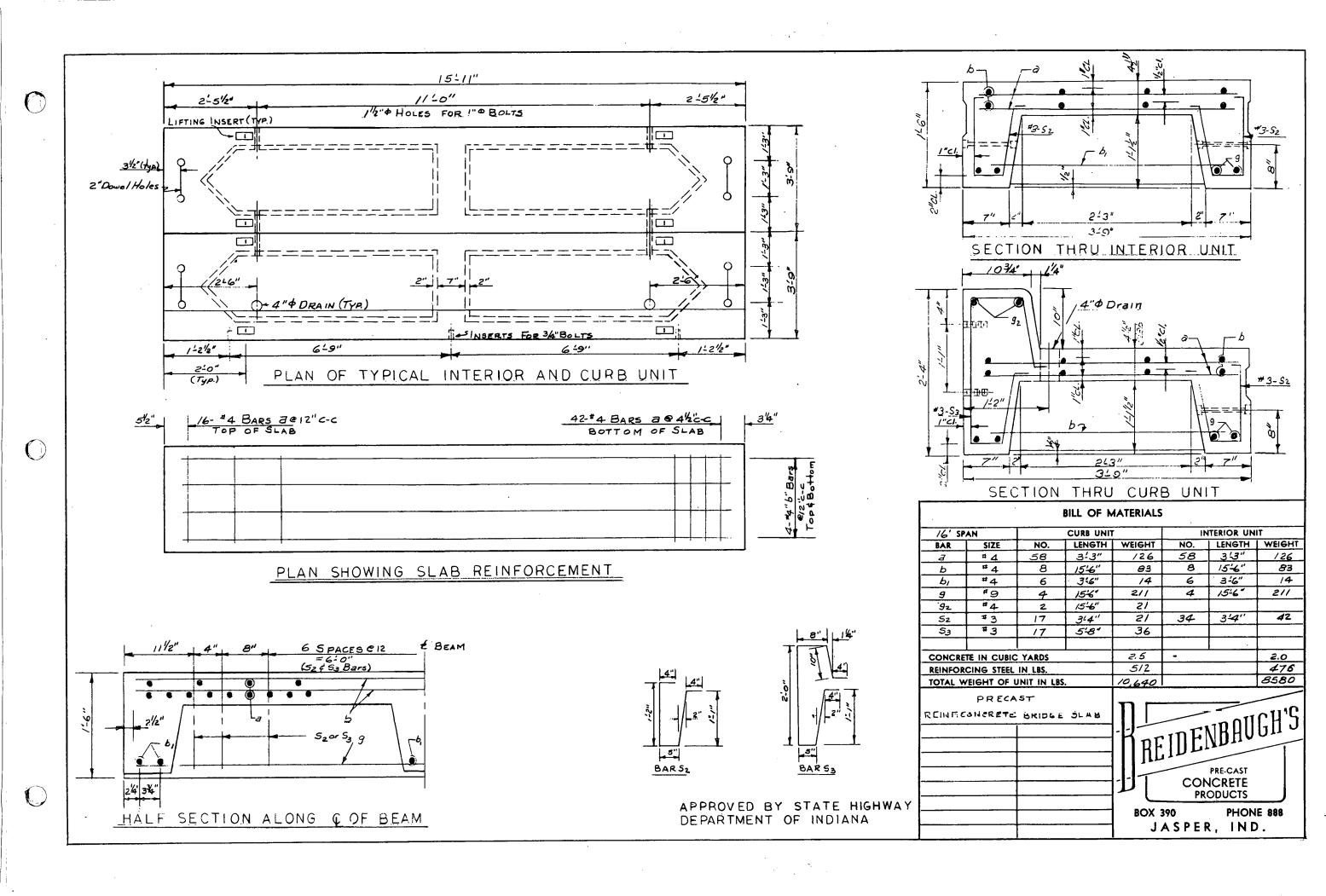


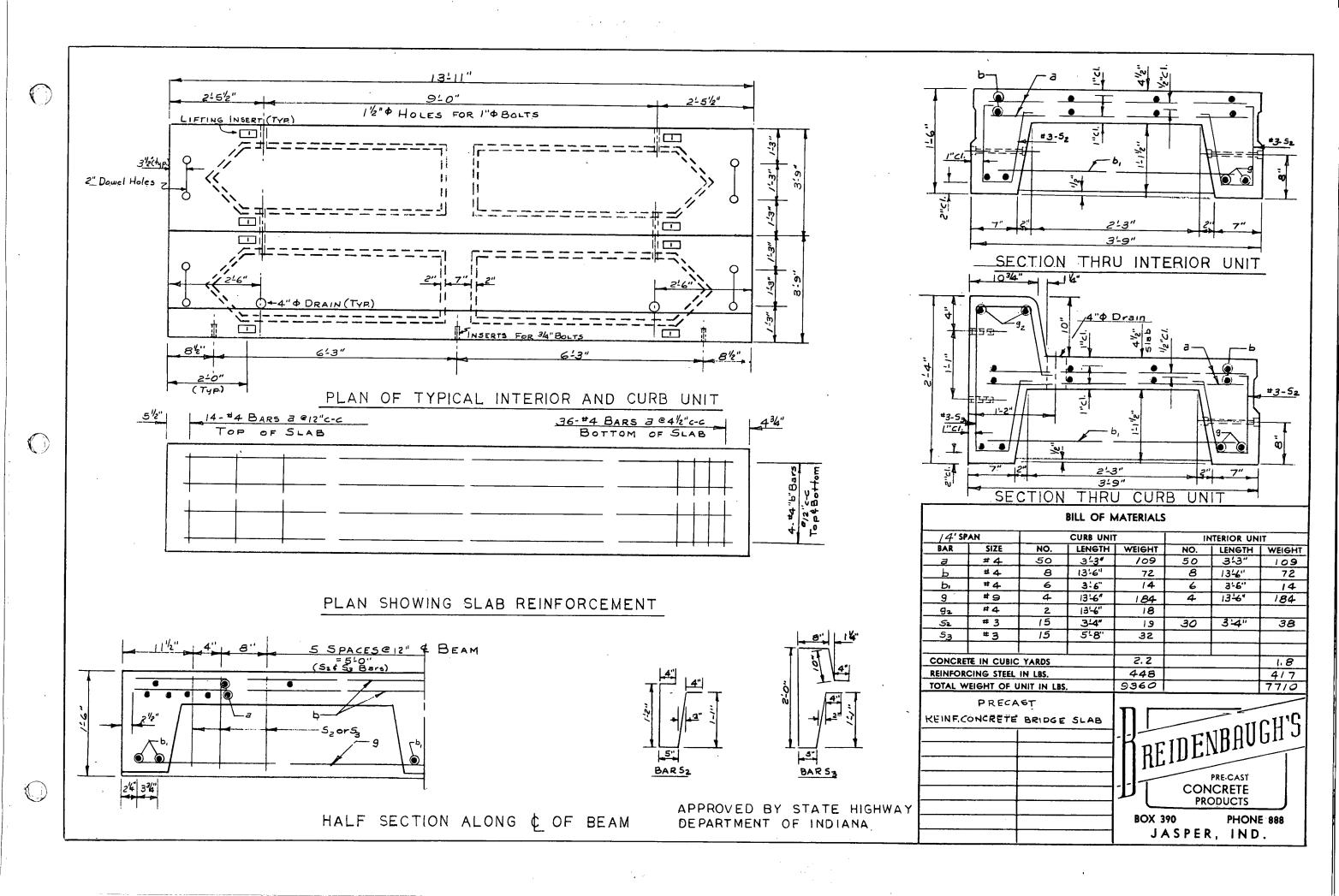


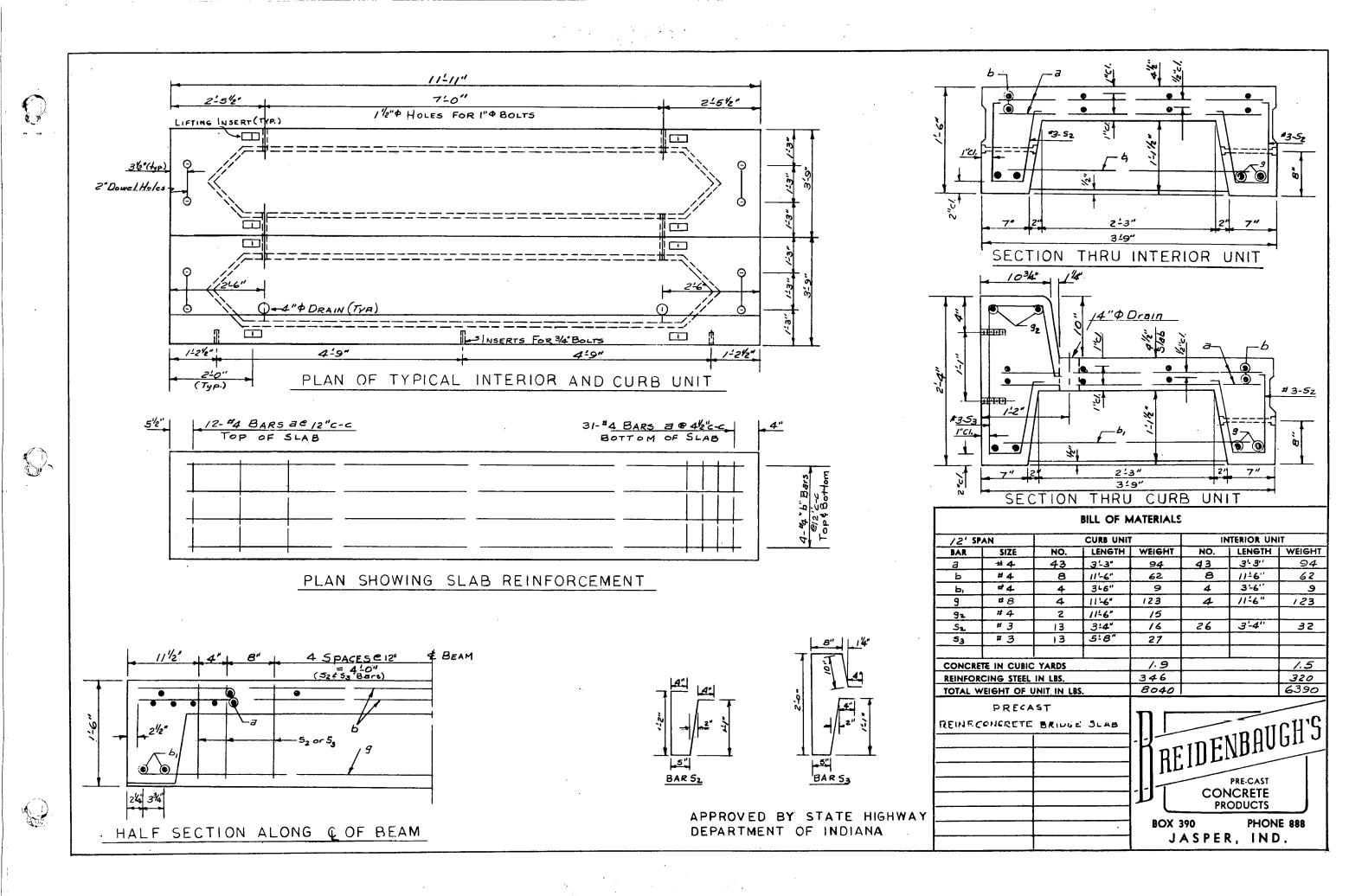












Mr. William Henry Snyder County Attorney of Monroe County 122 E. 6th St. Bloomington, Ind.

Dear Sir:

I received your letter of December 11, 1958 in regard to the straightening of the road that runs through my property, south of Bean Blossom creek.

In your letter you made the following statement:Quote, "The Board of Commissioners plan to eliminate the big curve from the foot of the hill up to the existing bridge and the new road would run directly through the acerage which you own on the east side of the present road."

This statement does not show a proper understanding of the situation. There is no big curve here. The only crookedness in this road that would be practical to eliminate is at the foot of Tabor Hill, about 450 to 500 feet long; approximately half of this distance is in the hill itself. When this road is viewed from the village of Mount Tabor, looking south at eye level, it has the appearance of being more crooked than it actually is. I believe this illusion has deceived some of those who are interested in this improvement.

I have taken the trouble to prepare a sketch traced from an actual aerial photograph of my farm, which I believe is a more proper perspective. This sketch is self explanatory.

You will note, that the changes I suggest are less expensive, both to me and to the county, and would make this road, perhaps not perfectly, but practically, straight. I do not believe the expense of moving this entire road would be justified.

If the County Commissioners and the County Engineer can agree, or come near to agreeing with me on this matter, I will sign an easement for this right of way and donate any necessary fill dirt as indicated on my sketch. The only condition being that the old fence rows be cleared of fences, bushes, etc. to make the land I recover on the west side as usable as possible. The rubbish from this cleaning up can be dumped in the gullies on my property along the road up Tabor Hill, preferable on the east side. Also, I would appreciate it very much if a steel culvert were put in at the entrance to my barn lot. I am willing to stand the loss of the old fence and some apple trees that grow on the east side of the road.

If the County Engineer has any ideas that seem better than mine, I will consider them if I am informed of the details. If a personal meeting is necessary, It will have to be on a week end.

I am enclosing copies of this letter and the sketch for the Commissioners and the County Engineer.

I trust we can come to an agreement. My phone no. is Tr-4=7404 Very truly yours,

Dewly a David

Lafayette, Indiana September 18, 1963

Mr. C. C. Dawes:

Ref: Proposed easement for County Road, Hunters, Indiana

The matter of constructing a new County Road, parallel and adjacent with our westerly right of way line between Curry Pike and Vernal Pike at Hunters, Indiana, has been given new impetus account of the increased traffic congestion of this area which resulted in an accident last weekend. In order that construction of this roadway can be completed in the present year, the Board of County Commissioners of Monroe County have again requested, thru Mr. John Stapleton, County Surveyor, that an easement be granted for this proposal. The proposed easement is for a 60-ft. strip of land lying along the east side of our industrial property (20 acres) at Hunters, Indiana, as shown in red coloring on the accompanying prints.

For further handling I have attached herewith five (5) location prints, three (3) copies of description of property involved, and a copy of letter received from the Monroe County Attorney relative to this proposal.

It is my opinion that the following stipulations should be made conditions of this grant:-

- 1 Property to be used for establishing a public road connecting the two county roads known as Curry Pike and Vernal Pike
- 2 Railroad may at any time in the future have permission to cross this easement with tracks for serving the area lying west thereof.
- 3 Proposal is naturally contingent on the County receiving permission to use small triangular parcel owned by the Bloomington Advancement Association located on the extreme southerly end of the Monon grant.

NOTED

Asst. Chief Engineer 1963

-. M. B

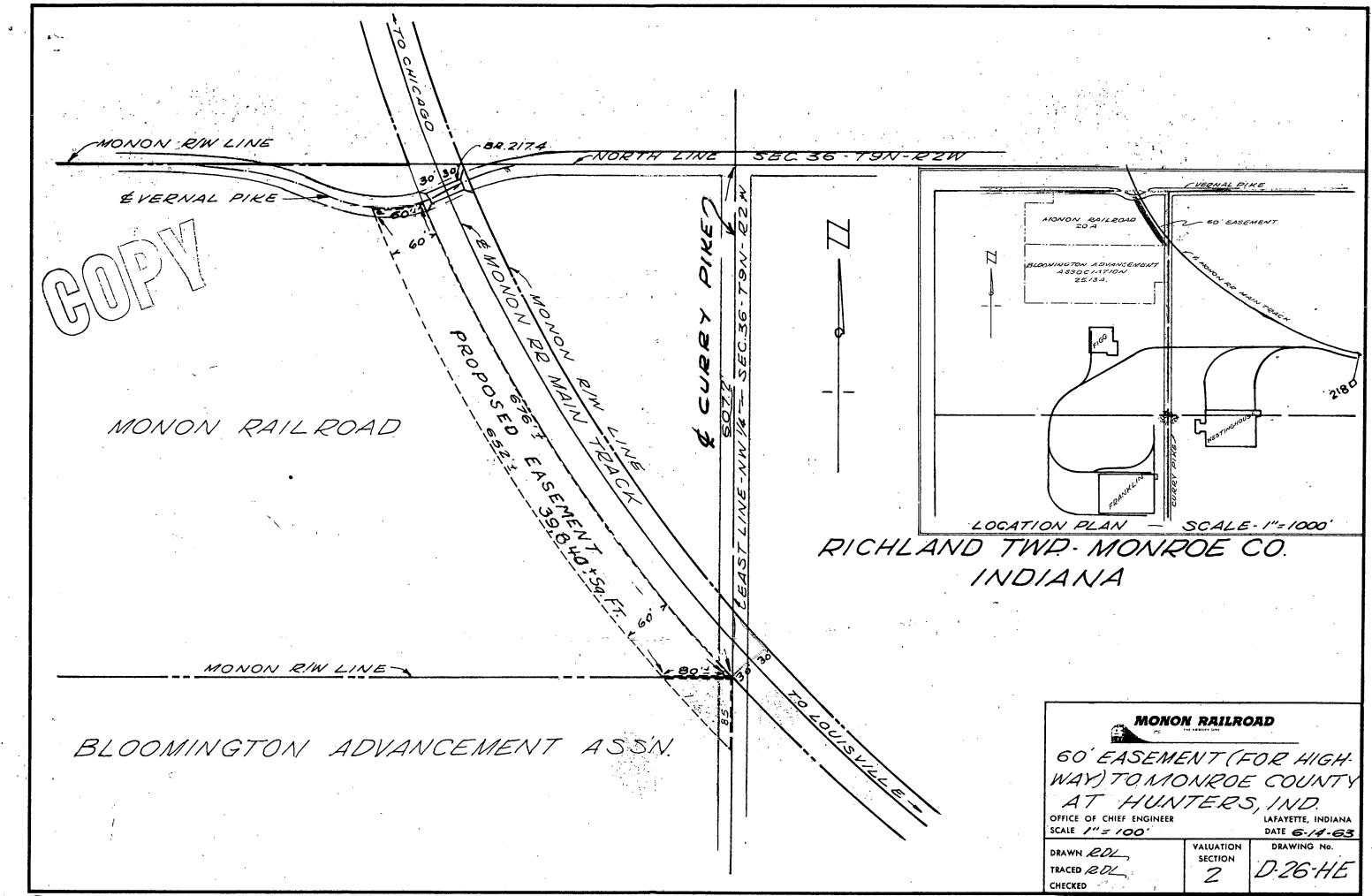
cc: Mr. J. J. Stein

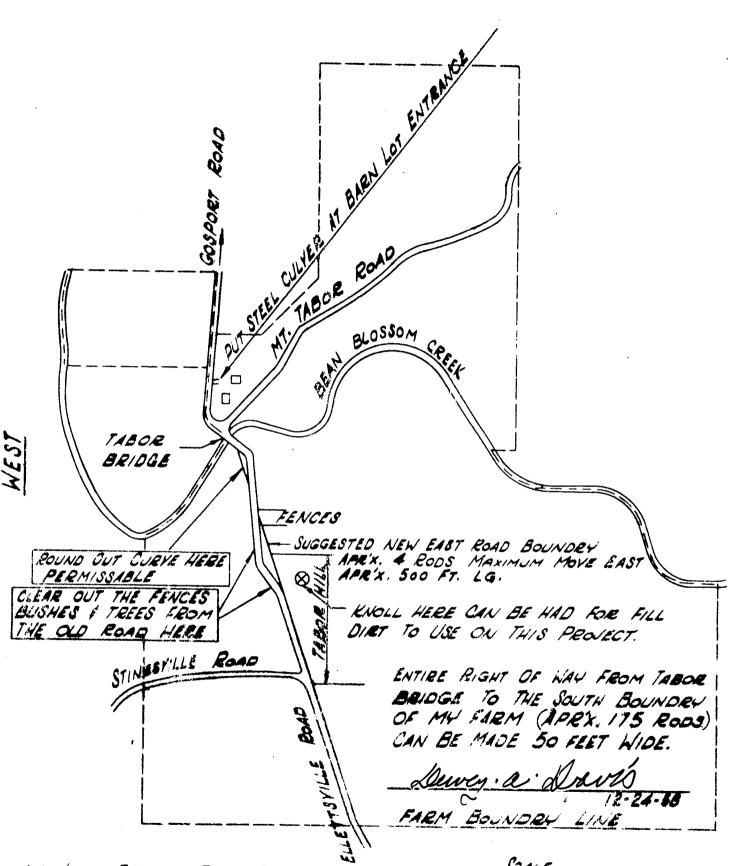
### An Easement to Monroe County for Roadway Purposes

A parcel of land sixty (60) feet in width located along and adjacent to the Monon Railroad's westerly right of way line in the Northeast Quarter (NE+) of the Northwest Quarter (NW+) of Section 36, Township 9 North, Range 2 West, Monroe County, State of Indiana, and more fully described as follows:

Beginning at a point on the east line of the NWL of Section 36, Township 9 North, Range 2 West, six hundred seven and two tenths (607.2) feet south of the northeast corner of said NWL, running thence in a northwesterly direction on a curve to the right with a radius of 1,940 feet along the Monon Railroad,'s westerly right-of-way a distance of six hundred seventy-six (676(2) feet more or less to a point in the centerline of county road known as Vernal Pike; thence in a westerly direction along the centerline of said Vernal Pike a distance of sixty (60(2) feet more or less to a point sixty (60) feet westerly measured at right angles from waid westerly right-of-way line; thence in a southeasterly direction on curve with a radius of 2,000 feet and parallel with the first described line a distance of six hundred fifty-two (652(2)) feet more or less thence east a distance of eight (802) feet more or less to point of beginning.

The above descirbed parcel of land contains an area of 39,840 square feet, more or less, and is herewith granted for the roadway purpose only and if this pardel ceases to be used as such, it shall revert to the Monon Railroad.





ALL LINES TRACED FROM AN AERIAL PHOTOGRAPH OF FARM.

The Action

SCALE
0 10 20 40 60 80 EODS

TANCH - APRIX. 365 13 FT TMILE - APRIX. TOB INCHES.

SOUTH

"Use sketches below when possible unless you have a special case such as a radius of more than 55 at the corner of an intersecting road or where there are more than two driveways. Fill in all blanks in the sketch which applies to your driveway and answer all questions in square at lower right hand corner. STATE ROUTE (A) R/w Line Radius (8) Sidewalk (A) (c.) ROUTE STATE (D) Property Line 8w or Property Line Radius (°°°) Pumps (C) R/w Line Dimensions in Lineal Feet Dimensions in Lineal Feet (A) = 40' Maximum ROUTE (A) = 40' Maximum (B1) = 5' Radius Required (B) = 5' (Bz)= 5' Maximum' ROUTE (c) = 30' (C) = 30' Maximum Dimensions in Lineal Feet  $\mathbf{v}$ (D) = 3'Minimum (D)= 3' Minimum (A) = 70 Maximum (E)- 10'  $(B) = 20^{\circ}$ STATE (All of those which connect a state highway where (F) - 10'(C) = 30raised curb is used, with a residence, barn, private Required Negative Grade 1" per ft. (D)= 10' Minimum COMPLETELY garage or other improved property; and ordinarily used All of those which connect a state highway when raised only by the owner or occupant of the premises, his curbs are used with private or public property and which (Same as Class I but located where the state guests and necessary service vehicles.) are used for commercial purposes or which will ordinarihighway is constructed with shoulders without ly carry a much heavier traffic movement than Classes raised curbs.) (I and II.) OUT CLASS-III Shoulder CLASS - II CLASS-I ÷,0 g £15% FILLED Grade Type of road surface R/w Line-R/w Line Width of road surface Width of right of way\_ BE Approach Is entrance at least 5' from adjacent property line? STATE ROUTE Pavement Edge STATE ROUTE Is any drain tile required?. MUST (A) If drain tile is required, indicate the Size, Length and Kind. Edge inches, Length Radius Radius (8) CORRUGATED METAL, REINFORCED CONCRETE OR VITRIFIED Radius (C) (c) (C) CLAY. (Cross out all except the kind of pipe to be used.) Pavement Approximate grade of approach\_\_\_ SKETCH R/w Line R/w Line Radius Are there any railroad crossings closer than 500'?\_ Radius (B4) state distance Is sight distance along State Road at least 500' each way from approach? ROUTE (A) ROUTE Give type of material used in constructing driveway \_\_\_ Dimensions in Lineal Feet Dimensions in Lineal Feet If this is aggregate, how is it to be bound ?\_ (A) = 70' Maximum (80' if single drive) (A)= 40' Max where curb const is used. STATE (Bi) = 20 Is angle of your approach to edge of pavement 45° or more? (A)= 70' " shoulder " " Lof Pavement (Bz) = 10'Is there a road intersection within 100'?\_ (B) = 5' " curb " - " (83) = 30If so, give radius at road intersection \_ (B)=20' " shoulder " " " (B4) - 5'Does any part of approach encroach on this radius? (C)=30' 4 (C) = 40 Note the following definitions: (D): 10 Min. where shoulder const. is used (D) = 10 Minimum Property Line Driveway (D) - 3 Min Where curb const. is used (E) = 10' a. Every way or place in private ownership and used for vehicular (F) = 10' travel. (Back of the State Highway right of way line.) Entrance Same as Class III but located where the state highway is constructed All of those connecting a state highway with vacant lots, fields a. The point of connection of the driveway and approach (at the and other unimproved property and not used commercially. with shoulders without raised curbs. State Highway right of way line). CLASS~V CLASS-IV Approach a. A place improved for vehicular or pedestrian traffic on highway right of way which connects the travelled portion of the highway with a driveway or pedestrian walkway. (This includes the part on the right of way of the State Highway.) Driveway Entrances and Approaches must be separated with a traffic island which must be protected by one of the methods outlined in the application. This method must be indicated on this sketch.

(o) "The permittee shall remove or relocate any such entrances or approaches when requested to do so by the Commission in the interest of safety to highway traffic. For the purpose of Road or Bridge construction or improvement, said driveway entrances and approaches shall be removed at any time upon the request of the Indiana State Highway Commission. Permits issued for driveway entrances and approaches may be rescinded at any time by the Indiana State Highway Commission. Driveway entrances and approaches must be complete within one year after the permit is issued; otherwise, the permit will be cancelled.

(p) "All applications for permits under these regulations shall be made on a form prescribed by the Commission and be accompanied by clear drawings, preferably in ink, or blue prints, in quadruplicate, showing exact location of and naming:" (See reverse side. Where possible use sketch on back of this form using blanks to show:)

Driveway and Approaches Property Lines

(8) Distance from right of way line to gasoline pumps and other structures

Right of Way Lines Intersecting roads, streets or railways within five

Type of surface and width of driveways Type of surface and width of approaches Proposed turning radii

hundred (500) feet Width of right of way

Width and type of road surface Necessary and existing pipe, tile or other drains stating size and kind

and between approaches Rate of slope or grade of approaches and driveways

Proposed treatment of right of way area adjacent to

On receipt and approval of such application, a tentative permit shall be granted for construction. A final permit will be granted when contruction has been completed to the satisfaction of the Commission.

"The Commission requires a performance bond with each application for a Commercial driveway. A minimum bond (q) "The Commission requires a performance bond with each application for a commercial diversal. It is not state of \$2500.00 is required, and the amount to be increased to equal the estimated cost of that part of the project on the State of \$2500.00 is required, and the amount to be increased to equal the estimated cost of that part of the project on the State of \$2500.00 is required, and the amount to be increased to equal the estimated cost of that part of the project on the State of \$2500.00 is required, and the amount to be increased to equal the estimated cost of that part of the project on the State of \$2500.00 is required, and the amount to be increased to equal the estimated cost of that part of the project on the State of \$2500.00 is required, and the amount to be increased to equal the estimated cost of that part of the project on the State of \$2500.00 is required, and the amount to be increased to equal the estimated cost of that part of the project on the State of \$2500.00 is required, and the amount to be increased to equal the estimated cost of that part of the project on the State of \$2500.00 is required, and the amount to be increased to equal the estimated cost of that part of the project on the State of \$2500.00 is required. Highway right-of-way. A bond may also be required at the Commission's discretion on applications for private driveways. Such bonds are required to insure compliance with all terms of the permit, and shall be released only when the work described

on the permit has been completed to the satisfaction of the Commission.

(r) "Any two approaches shall be at least ten (10) feet apart, and shall be so constructed as to clearly define the approach area and leave the area between and adjacent to the approaches unimproved for vehicular travel. Such unimproved area shall not be used by vehicles in any way and the addition of any material by the permittee to provide for such use is expressly pro-

Where curb cuts are required, raised curb shall be constructed around the five (5) feet radius between the pavement edge and approach edge on each side of the approach. Where curb cuts are not required, maximum permissible turning radii as provided in Section 5 may be used. Turning radii of adjacent approaches may be tangent at the same point on the right of way line or at the pavement edge; the two turning radii on one side of an approach may be tangent at the same point at the approach edge; thus making the unimproved area between approaches oval or circular in shape, with a minimum length of ten (10) feet, measured parallel to the pavement, at its longest point.

The right of way area adjacent to or between the approaches may be graded at the permittee's expense, subject to drainage requirements as determined by the Commission. The permittee may plant in this area, grass, flowers, or low growing shrubs that never attain sufficient height to obstruct clear vision in any direction. He shall prevent encroachment on this restricted area by such use of any of the following seven optional methods of protection as may be necessary to keep all vehicles in their proper paths. (Except in cases where it is more practical to use a longer radius as specified by the Commission).

(a) "Concrete curbs, six (6) inches high not closer to highway pavement than designed edge of shoulders or existing adjacent curb. Curb face to be sloped back at least two (2) inches. It shall be placed immediately adjacent to edge of approach pavement.

"Wood posts, five (5) feet apart, with tops five (5) inches to seven (7) inches in diameter, thirty (30) inches below and eighteen (18) inches above the ground; top six (6) inches painted black and next twelve (12) inches white, placed along the shoulder line only. One or more of the other options shall be used to supplement the line of posts if additional protection is need-

ed, placing them at the shoulder or right of way line and eighteen (18) inches from the approach surface.

(c) "Boulders, six to twelve (6 to 12) inches high, touching each other, placed in same relation to surface edge as in (b). They must be whitewashed or painted white.

(d) "Logs, six to eight (6 to 8) inches in diameter, firmly staked in place, whitewashed or painted white, and placed as nearly as possible as in (b).

"Flexible Steel Guardrail, design and construction to comply with the Commission's standard specifications,

"Masonry walls not over eight (8) inches high, with face sloped back at least three (3) inches and placed as in (b).

"Low growing hedge plants or other evergreen or deciduous shrubs that do not grow to a height great enough to ob-

struct vision in any direction.

The drawing accompanying this application for permit shall show exactly how it is proposed to apply the method selected. If encroachment develops the need for additional protection it shall be provided promptly by the permittee. Section 5. "The driveways, entrances and approaches in the various classes shall be subject to the following: Special Require-

ments and Rest	rictions	_
Class I (a) I	Maximum permitted width of approach	30 feet
(b) 1	Maximum turning radius at pavement edge	5 feet
Class II (a) I	Maximum permitted width of approach	30 feet
(b) I	Maximum furning radius at pavement edge	20 feet
Class III (a) N	Maximum permitted width of approach	30 feet
	Furning radius required at pavement edge	5 feet
(c) I	Maximum radius permitted at right of way	5 feet
Class IV (a) M	Iaximum permitted width of approach	40 feet
(b) I	Maximum turning Radii	
1	. Between payement edge and outside edge of approach	20 feet
. 2	Between pavement edge and inside edge of approach	10 feet
	(Inside edge is edge adjacent to separating area where two drives are constructed.)	
3	Between right of way line and outside edge of approach	5 feet
4	Between right of way line and inside edge of approach	30 feet
Class V (a) M	Iaximum permitted width of approach	30 feet
(b) N	Maximum turning radius at pavement edge	
\~\^\ i	. Where curb construction is used	5 feet
	. Where shoulder construction is used	20 feet"

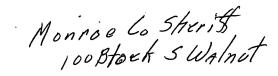
Is sketch attached in accordance with Section	n 3	(p)	?_
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Final approval will not be given until work as outlined above is completed to the satisfaction of the Indiana State Highway Commission. Applicant will notify State Highway Superintendent when said work is complete and ready for inspection. (City officials must approve this application if alley is used as part of private driveway.) If this is located inside city limits proper authority

	Print	Name of Applicant or Name of Company
Superintendent	<del></del>	
District Engineer		Signature of Applicant or Company Representative
	Address	
Superintendent of Maintenance	11441055.	(Give Complete Post Office Address for Mailing P

Form M-173-E 10M-5-61 (In Quadruplicate to Sub-Dist. Office Thence to District Office and Central Office)

C



Number	 	
District	 	
uh.Dietriet		

### APPLICATION FOR A PERMIT TO CONSTRUCT A DRIVEWAY ENTRANCE AND APPROACH

TO THE INDIANA STATE HIGHWAY COMMISSION

Indianapolis, Indiana ———	Indiana	, 19
I hereby make application for a permit to cons	•	n-LOCATION: State Road No.
n which side of road (North, South, East or West)	<u> </u>	
it.necessary to make any cut in the right of way o	utside the driveway limits?	If so, give exact LENGTH
WIDTH	DISTANCE FROM EDGE RO	AD SURFACE
Indicate with a check mark class applied for:  ass I ( ) "All of those which connect a state I other improved property and ordinary us service vehicles.	highway where raised curb is used with a r sed only by the owner or occupant of the pr	esidence, barn, private garage or remises, his guests and necessary
ass II ( ) "Same as Class I but located where ass III ( ) "All of those which connect a state	the state highway is constructed with should highway when raised curbs are used with or which will ordinarily carry a much heavi	private or public property and
ass IV (') "Same as Class III but located wi	here the state highway is constructed with	shoulders without raised curbs.

mercially. Purpose of Driveway:

"All of those connecting a state highway with vacant lots, fields and other unimproved property and not used com-

If this is a driveway entrance and approach to a filling station or to gasoline pumps, have you secured permission from the State Fire Marshal's Office? This must be done before application will be approved by the Indiana State Highway Commission.

If this application to construct a driveway entrance and approach is granted, the applicant agrees to the following applicable Following Regulations officially Adopted in Accordance with Chapter 48, Acts 1939:-Section 3. The following general regu-

lations shall apply to all classes designated in Section 2.

(a) "No portion of any approach at the intersection of streets or highways shall encroach upon the right of way area between lines drawn to the pavement edge perpendicular to the right of way lines, from points on the right of way lines ten feet back from the point of intersection of the said right of way lines or their prolongation, where shoulder construction is used, or three feet back from said point of intersection where raised curbs are used: Provided that no part of any such approach shall encroach on any intersection turning area with an edge radius of fifty-five (55) feet or less or interfere with sight distance, easy turning or traffic movement within the highway or street intersection: Provided, further, that alleys shall not be considered to be streets and may, with the consent of local authorities, be included in approaches but in such cases the maximum dimensions shall not exceed those permitted for other approaches in the same class. Where the alley is not included the entrance must be a minimum of five (5) feet from the nearest boundary line of the alley. Any approach may, subject to other limitations in these regulations be constructed at any angle to the pavement edge from forty-five (45) degrees to ninety (90) degrees but none shall be permitted below forty-five (45) degrees.

"No entrance shall be closer than five (5) feet to adjacent property line and no approach shall be so constructed that any part of the same extends in front of property belonging to a person other than the permittee unless both property owners

sign a joint application for a permit.

(c) "Gasoline pumps or similar facilities served by such driveways and approaches shall be a minimum of ten (10) feet from the right of way line of the highway and no approach shall be constructed in front of any such facility which is less than ten (10) feet from the right of way line.

(d) "All drainage pipes or tile used in the construction of driveways and approaches shall be a minimum of twelve (12) inches in diameter and as much larger as the Commission shall deem necessary for proper drainage, and on all new driveways and approaches shall be furnished by the permittee. All pipe or tile and other drainage structures used shall meet the approval of the

Commission as to type, quality, size and length.

(e) "All driveways and approaches shall be so constructed that they shall not interfere with drainage of the street or highway. If it is proposed to construct any portion of an approach on a slope or grade greater than fifteen (15) percent, the grade or slope shall be designated on the application. If no designation of grade is shown on the application, the approach shall not be constructed on a grade greater than fifteen (15) percent.

(f) "No more entrances or approaches shall be permitted connecting any state highway with any single property than are necessary to adequately accommodate the traffic that may reasonably be expected.

"The construction of such driveways and approaches shall not interfere with any existing structure on any state highway right of way without specific permission in writing from the Commission or other owner thereof.

(h) "All entrances and approaches shall be so located as to provide adequate sight distance in both directions along the

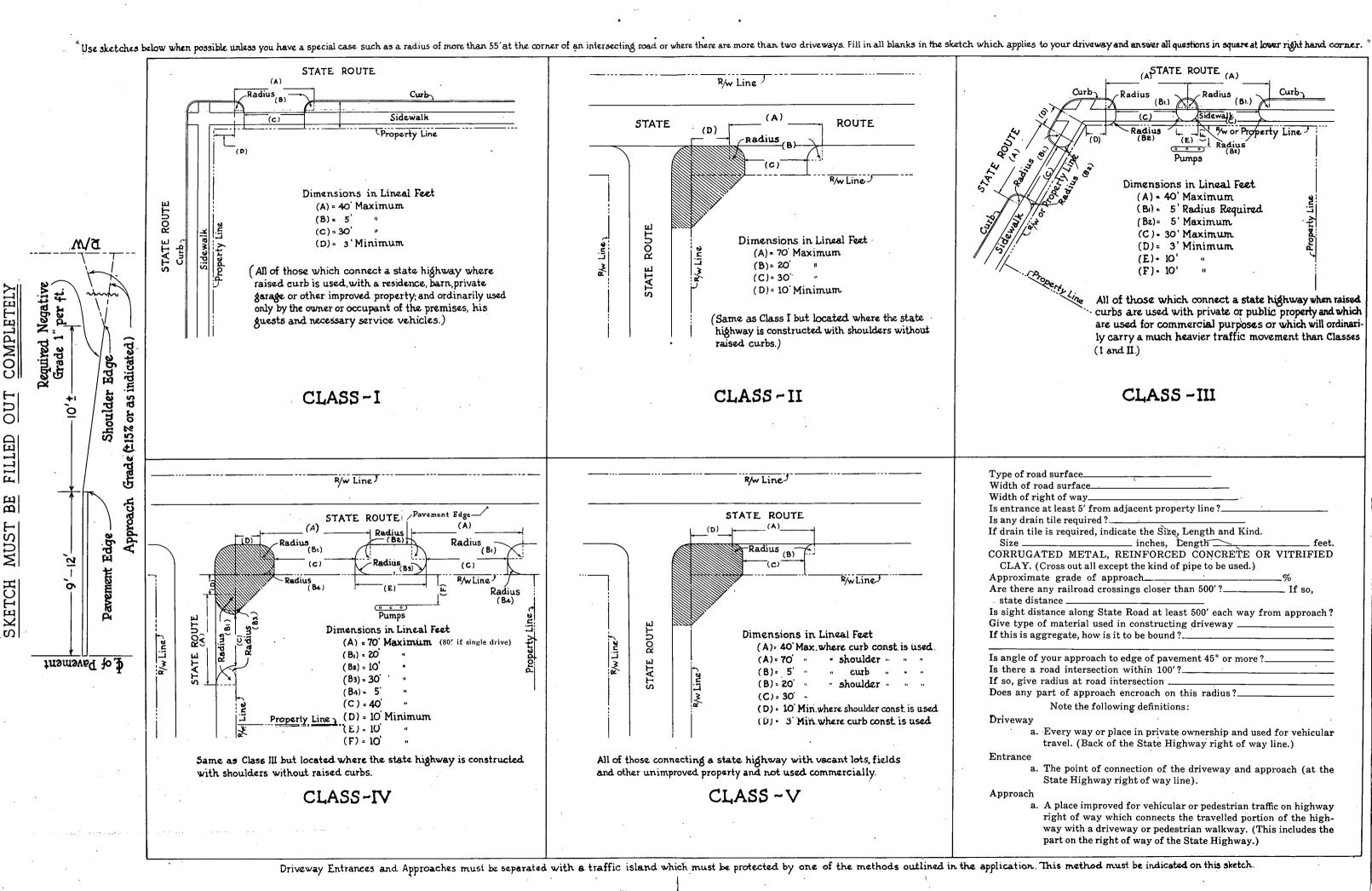
highway for safe access to the highway without interfering with traffic on the highway.

(i) "No entrance or approach shall be located or constructed so as to interfere with or prevent the proper location of necessary highway signs.

"The permittee shall assume responsibility for all maintenance of such approaches from the right of way line to a point thirty (30) inches from the edge of the traveled roadway. If the approach or driveway is built of loose aggregate, said aggregate shall be bound with some material so as to prevent loose aggregate from being carried onto the highway pavement, or the permittee shall keep the pavement free of loose aggregate at all times.

(k) "No such entrance or approach shall be relocated or its dimensions altered without written permission of the Com-

"On the day preceding the beginning of work under any permit for approach construction, the permittee shall secure special permission to proceed from the local Commission representative in charge.



"The permittee shall remove or relocate any such entrances or approaches when requested to do so by the Commission in the interest of safety to highway traffic. For the purpose of Road or Bridge construction or improvement, said driveway entrances and approaches shall be removed at any time upon the request of the Indiana State Highway Commission. Permits issued for driveway entrances and approaches may be rescinded at any time by the Indiana State Highway Commission. Driveway entrances and approaches must be complete within one year after the permit is issued; otherwise, the permit will be cancelled.

(p) "All applications for permits under these regulations shall be made on a form prescribed by the Commission and be accompanied by clear drawings, preferably in ink, or blue prints, in quadruplicate, showing exact location of and naming:" (See reverse side. Where possible use sketch on back of this form using blanks to show:)

Driveway and Approaches

Property Lines Right of Way Lines

Intersecting roads, streets or railways within five hundred (500) feet

Width of right of way

Width and type of road surface

Necessary and existing pipe, tile or other drains stating size and kind

Distance from right of way line to gasoline pumps and other structures

Type of surface and width of driveways Type of surface and width of approaches Proposed turning radii

Proposed treatment of right of way area adjacent to and between approaches

(13)Rate of slope or grade of approaches and driveways

On receipt and approval of such application, a tentative permit shall be granted for construction. A final permit will be granted when contruction has been completed to the satisfaction of the Commission.

(q) "The Commission requires a performance bond with each application for a Commercial driveway. A minimum bond of \$2500.00 is required, and the amount to be increased to equal the estimated cost of that part of the project on the State Highway right-of-way. A bond may also be required at the Commission's discretion on applications for private driveways. Such bonds are required to insure compliance with all terms of the permit, and shall be released only when the work described "The Commission requires a performance bond with each application for a Commercial driveway. A minimum bond

on the permit has been completed to the satisfaction of the Commission.

(r) "Any two approaches shall be at least ten (10) feet apart, and shall be so constructed as to clearly define the approach area and leave the area between and adjacent to the approaches unimproved for vehicular travel. Such unimproved area shall not be used by vehicles in any way and the addition of any material by the permittee to provide for such use is expressly pro-

Where curb cuts are required, raised curb shall be constructed around the five (5) feet radius between the pavement edge and approach edge on each side of the approach. Where curb cuts are not required, maximum permissible turning radii as provided in Section 5 may be used. Turning radii of adjacent approaches may be tangent at the same point on the right of way line or at the pavement edge; the two turning radii on one side of an approach may be tangent at the same point at the approach edge; thus making the unimproved area between approaches oval or circular in shape, with a minimum length of ten (10) feet, measured parallel to the pavement, at its longest point.

The right of way area adjacent to or between the approaches may be graded at the permittee's expense, subject to drainage requirements as determined by the Commission. The permittee may plant in this area, grass, flowers, or low growing shrubs that never attain sufficient height to obstruct clear vision in any direction. He shall prevent encroachment on this restricted area by such use of any of the following seven optional methods of protection as may be necessary to keep all vehicles in their proper paths. (Except in cases where it is more practical to use a longer radius as specified by the Commission).

(a) "Concrete curbs, six (6) inches high not closer to highway pavement than designed edge of shoulders or existing adjacent curb. Curb face to be sloped back at least two (2) inches. It shall be placed immediately adjacent to edge of approach pave-

"Wood posts, five (5) feet apart, with tops five (5) inches to seven (7) inches in diameter, thirty (30) inches below and eighteen (18) inches above the ground; top six (6) inches painted black and next twelve (12) inches white, placed along the shoulder line only. One or more of the other options shall be used to supplement the line of posts if additional protection is need-

ed, placing them at the shoulder or right of way line and eighteen (18) inches from the approach surface.

(c) "Boulders, six to twelve (6 to 12) inches high, touching each other, placed in same relation to surface edge as in (b).

They must be whitewashed or painted white. (d) "Logs, six to eight (6 to 8) inches in diameter, firmly staked in place, whitewashed or painted white, and placed as nearly as possible as in (b).

"Flexible Steel Guardrail, design and construction to comply with the Commission's standard specifications.

"Masonry walls not over eight (8) inches high, with face sloped back at least three (3) inches and placed as in (b).

"Low growing hedge plants or other evergreen or deciduous shrubs that do not grow to a height great enough to obstruct vision in any direction.

The drawing accompanying this application for permit shall show exactly how it is proposed to apply the method selected. If encroachment develops the need for additional protection it shall be provided promptly by the permittee.

Section 5. "The driveways, entrances and approaches in the various classes shall be subject to the following: Special Require-

ments and Restrictions	3 <b>.</b>
Class I (a) Maximum permitted width of approach	30 feet
(b) Maximum turning radius at pavement edge	5 feet
Class II (a) Maximum permitted width of approach.	30 feet
(b) Maximum turning radius at pavement edge	20 feet
Class III (a) Maximum permitted width of approach	30 feet
(b) Turning radius required at pavement edge	5 feet
(c) Maximum radius permitted at right of way	5 feet
Class IV (a) Maximum permitted width of approach	40 feet
(b) Maximum turning Radii	
1. Between pavement edge and outside edge of approach	20 feet
2. Between payement edge and inside edge of approach	10 feet
(Inside edge is edge adjacent to separating area where two drives are const	ructed.)
3. Between right of way line and outside edge of approach	5 feet
4. Between right of way line and inside edge of approach.	30 feet
Class V (a) Maximum permitted width of approach	30 feet
(b) Maximum turning radius at pavement edge	
1. Where curb construction is used	5 feet
2. Where shoulder construction is used	20 feet"

Is sketch	attached	in	accordance	with	Section 3	(g)	?_
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Final approval will not be given until work as outlined above is completed to the satisfaction of the Indiana State Highway Commission. Applicant will notify State Highway Superintendent when said work is complete and ready for inspection. (City officials must approve this application if alley is used as part of private driveway.) If this is located inside city limits proper authority must also be secured from city.

Superintendent	Print Name of Applicant or Name of Company
District Engineer	Signature of Applicant or Company Representative
Superintendent of Maintenance	Address(Give Complete Post Office Address for Mailing Purposes)

Form M-173-E 10M-5-61 10M—5-61 (In Quadruplicate to Sub-Dist. Office Thence to District Office and Central Office)

Number District Sub-District



Class IV

### APPLICATION FOR A PERMIT TO CONSTRUCT A DRIVEWAY ENTRANCE AND APPROACH

TO THE INDIANA STATE HIGHWAY COMMISSION

Division of Maintenance Indianapolis, Indiana	- ··	
	Indiana	, 19
I hereby make application for a permit to construct	t a driveway entrance and approach on-LOC	ATION: State Road No.
, Sec, at the following des	cribed location:	
on which side of road (North, South, East or West)?		
s it, necessary to make any cut in the right of way outside	de the driveway limits?	If so, give exact LENGTH
WIDTH	DISTANCE FROM EDGE ROAD SU	RFACE
Indicate with a check mark class applied for:— Class I ( ) "All of those which connect a state high other improved property and ordinary used of service vehicles. Class II ( ) "Same as Class I but located where the	only by the owner or occupant of the premises,	his guests and necessary
lass III ( ) "All of those which connect a state high	hway when raised curbs are used with private thich will ordinarily carry a much heavier traffi	e or public property and

mércially. Purpose of Driveway:

"Same as Class III but located where the state highway is constructed with shoulders without raised curbs.

"All of those connecting a state highway with vacant lots, fields and other unimproved property and not used com-

If this is a driveway entrance and approach to a filling station or to gasoline pumps, have you secured permission from the State Fire Marshal's Office? This must be done before application will be approved by the Indiana State Highway Commission. If this application to construct a driveway entrance and approach is granted, the applicant agrees to the following applicable

Following Regulations officially Adopted in Accordance with Chapter 48, Acts 1939:—Section 3. The following general regu-

lations shall apply to all classes designated in Section 2.

(a) "No portion of any approach at the intersection of streets or highways shall encroach upon the right of way area between lines drawn to the pavement edge perpendicular to the right of way lines, from points on the right of way lines ten feet back from the point of intersection of the said right of way lines or their prolongation, where shoulder construction is used, or three feet back from said point of intersection where raised curbs are used: Provided that no part of any such approach shall encroach on any intersection turning area with an edge radius of fifty-five (55) feet or less or interfere with sight distance, easy turning or traffic movement within the highway or street intersection: Provided, further, that alleys shall not be considered to be streets and may, with the consent of local authorities, be included in approaches but in such cases the maximum dimensions shall not exceed those permitted for other approaches in the same class. Where the alley is not included the entrance must be a minimum of five (5) feet from the nearest boundary line of the alley. Any approach may, subject to other limitations in these regulations be constructed at any angle to the pavement edge from forty-five (45) degrees to ninety (90) degrees but none shall be permitted below forty-five (45) degrees.

(b) "No entrance shall be closer than five (5) feet to adjacent property line and no approach shall be so constructed that any part of the same extends in front of property belonging to a person other than the permittee unless both property owners sign a joint application for a permit.

(c) "Gasoline pumps or similar facilities served by such driveways and approaches shall be a minimum of ten (10) feet from the right of way line of the highway and no approach shall be constructed in front of any such facility which is less than ten (10) feet from the right of way line.

(d) "All drainage pipes or tile used in the construction of driveways and approaches shall be a minimum of twelve (12) inches in diameter and as much larger as the Commission shall deem necessary for proper drainage, and on all new driveways and approaches shall be furnished by the permittee. All pipe or tile and other drainage structures used shall meet the approval of the

Commission as to type, quality, size and length.

(e) "All driveways and approaches shall be so constructed that they shall not interfere with drainage of the street or highway. If it is proposed to construct any portion of an approach on a slope or grade greater than fifteen (15) percent, the approach shall not interfere with drainage of the street or highway. If it is proposed to construct any portion of an approach on a slope or grade greater than fifteen (15) percent, the approach shall not interfere with drainage of the street or highway. grade or slope shall be designated on the application. If no designation of grade is shown on the application, the approach shall not be constructed on a grade greater than fifteen (15) percent.

(f) "No more entrances or approaches shall be permitted connecting any state highway with any single property than are necessary to adequately accommodate the traffic that may reasonably be expected.

"The construction of such driveways and approaches shall not interfere with any existing structure on any state high-

way right of way without specific permission in writing from the Commission or other owner thereof.

(h) "All entrances and approaches shall be so located as to provide adequate sight distance in both directions along the

highway for safe access to the highway without interfering with traffic on the highway.

(i) "No entrance or approach shall be located or constructed so as to interfere with or prevent the proper location of necessary highway signs.

"The permittee shall assume responsibility for all maintenance of such approaches from the right of way line to a point thirty (30) inches from the edge of the traveled roadway. If the approach or driveway is built of loose aggregate, said aggregate shall be bound with some material so as to prevent loose aggregate from being carried onto the highway pavement, or the permittee shall keep the pavement free of loose aggregate at all times.

(k) "No such entrance or approach shall be relocated or its dimensions altered without written permission of the Com-

"On the day preceding the beginning of work under any permit for approach construction, the permittee shall secure special permission to proceed from the local Commission representative in charge.

"The permittee shall remove or relocate any such entrances or approaches when requested to do so by the Commission in the interest of safety to highway traffic. For the purpose of Road or Bridge construction or improvement, said driveway entrances and approaches shall be removed at any time upon the request of the Indiana State Highway Commission. Permits issued for driveway entrances and approaches may be rescinded at any time by the Indiana State Highway Commission. Driveway entrances and approaches must be complete within one year after the permit is issued; otherwise, the permit will be cancelled.

(p) "All applications for permits under these regulations shall be made on a form prescribed by the Commission and be accompanied by clear drawings, preferably in ink, or blue prints, in quadruplicate, showing exact location of and naming:" (See reverse side. Where possible use sketch on back of this form using blanks to show:)

- Driveway and Approaches
  - Property Lines Right of Way Lines
- Intersecting roads, streets or railways within five
- hundred (500) feet
- Width of right of way Width and type of road surface
- Necessary and existing pipe, tile or other drains stating size and kind
- Distance from right of wav line to gasoline pumps and other structures
- Type of surface and width of driveways
- Type of surface and width of approaches Proposed turning radii
- Proposed treatment of right of way area adjacent to and between approaches
- Rate of slope or grade of approaches and driveways

On receipt and approval of such application, a tentative permit shall be granted for construction. A final permit will be granted when contruction has been completed to the satisfaction of the Commission.

"The Commission requires a performance bond with each application for a Commercial driveway. A minimum bond of \$2500.00 is required, and the amount to be increased to equal the estimated cost of that part of the project on the State Highway right-of-way. A bond may also be required at the Commission's discretion on applications for private driveways. Such bonds are required to insure compliance with all terms of the permit, and shall be released only when the work described

on the permit has been completed to the satisfaction of the Commission.

(r) "Any two approaches shall be at least ten (10) feet apart, and shall be so constructed as to clearly define the approach area and leave the area between and adjacent to the approaches unimproved for vehicular travel. Such unimproved area shall not be used by vehicles in any way and the addition of any material by the permittee to provide for such use is expressly pro-

Where curb cuts are required, raised curb shall be constructed around the five (5) feet radius between the pavement edge and approach edge on each side of the approach. Where curb cuts are not required, maximum permissible turning radii as provided in Section 5 may be used. Turning radii of adjacent approaches may be tangent at the same point on the right of way line or at the pavement edge; the two turning radii on one side of an approach may be tangent at the same point at the approach edge; thus making the unimproved area between approaches oval or circular in shape, with a minimum length of ten (10) feet, measured parallel to the pavement, at its longest point.

"The right of way area adjacent to or between the approaches may be graded at the permittee's expense, subject to drainage requirements as determined by the Commission. The permittee may plant in this area, grass, flowers, or low growing shrubs that never attain sufficient height to obstruct clear vision in any direction. He shall prevent encroachment on this restricted area by such use of any of the following seven optional methods of protection as may be necessary to keep all vehicles in their proper paths. (Except in cases where it is more practical to use a longer radius as specified by the Commission).

(a) "Concrete curbs, six (6) inches high not closer to highway pavement than designed edge of shoulders or existing adjacent curb. Curb face to be sloped back at least two (2) inches. It shall be placed immediately adjacent to edge of approach pavement.

"Wood posts, five (5) feet apart, with tops five (5) inches to seven (7) inches in diameter, thirty (30) inches below and eighteen (18) inches above the ground; top six (6) inches painted black and next twelve (12) inches white, placed along the shoulder line only. One or more of the other options shall be used to supplement the line of posts if additional protection is need-

ed, placing them at the shoulder or right of way line and eighteen (18) inches from the approach surface.

(c) "Boulders, six to twelve (6 to 12) inches high, touching each other, placed in same relation to surface edge as in (b). They must be whitewashed or painted white.

(d) "Logs, six to eight (6 to 8) inches in diameter, firmly staked in place, whitewashed or painted white, and placed as nearly as possible as in (b).

"Flexible Steel Guardrail, design and construction to comply with the Commission's standard specifications,

"Masonry walls not over eight (8) inches high, with face sloped back at least three (3) inches and placed as in (b).

"Low growing hedge plants or other evergreen or deciduous shrubs that do not grow to a height great enough to obstruct vision in any direction.

struct vision in any direction.

The drawing accompanying this application for permit shall show exactly how it is proposed to apply the method selected. If encroachment develops the need for additional protection it shall be provided promptly by the permittee.

Section 5 "The driveness and approaches in the various classes shall be subject to the following: Special Require-

Section o	. The driveways, entrances and approaches in the various classes shall be subject to the folic	wing. Special itel
ments and Re	estrictions	
Class I (a)	Maximum permitted width of approach	30 feet
(b)	Maximum turning radius at pavement edge	5 feet
Class II (a)	Maximum permitted width of approach	30 feet
(b)	Maximum turning radius at pavement edge	20 feet
Class III (a)	Maximum permitted width of approach	30 feet
(b)	Turning radius required at payement edge	5 feet
(c)	Maximum radius permitted at right of way	5 feet
Class IV (a)	Maximum permitted width of approach	40 feet
(b)	Maximum turning Radii	
	1. Between pavement edge and outside edge of approach	20 feet
	2. Between payement edge and inside edge of approach	10 feet
	(Inside edge is edge adjacent to separating area where two drives are constructed.)	
	3. Between right of way line and outside edge of approach	5 feet
	4. Between right of way line and inside edge of approach	30
Class V (a)	Maximum permitted width of approach	30 feet
(b)	Maximum turning radius at pavement edge	
` ,	1. Where curb construction is used	5 feet
	2. Where shoulder construction is used	20 feet"

Is sketch attached in accordance with Section 3 (p)?\_

Final approval will not be given until work as outlined above is completed to the satisfaction of the Indiana State Highway Commission. Applicant will notify State Highway Superintendent when said work is complete and ready for inspection. (City officials must approve this application if alley is used as part of private driveway.) If this is located inside city limits proper authority must also be secured from city.

	Print	Name of Applicant or Name of Company
Superintendent		
District Engineer		Signature of Applicant or Company Representative
<u></u> .	Address_	_
Superintendent of Maintenance	11441055	(Give Complete Post Office Address for Mailing Purposes)

Form M-173-E 10M-5-61 

Number	
District	
Sub-District	



### APPLICATION FOR A PERMIT TO CONSTRUCT A DRIVEWAY ENTRANCE AND APPROACH

TO THE INDIANA STATE HIGHWAY COMMISSION Division of Maintenance

	Indianapolis, Indiana		10
		Indiana	, 19
	make application for a permit to construct a c		LOCATION: State Road No.
n which side	of road (North, South, East or West)?		
s it,necessary	to make any cut in the right of way outside tl	he driveway limits?	If so, give exact LENGTH
	WIDTH	DISTANCE FROM EDGE ROAD	SURFACE
Class I ( )	vith a check mark class applied for:— ) "All of those which connect a state highway er improved property and ordinary used only vice vehicles.	where raised curb is used with a resid by the owner or occupant of the prem	dence, barn, private garage or ises, his guests and necessary
Class III ( ) whi	) "Same as Class I but located where the state "All of those which connect a state highway ich are used for commercial purposes or which ad II.	y when raised curbs are used with pr	rivate or public property and
class IV ( )	"Same as Class III but located where the	e state highway is constructed with shifth vacant lots, fields and other unimprov	noulders without raised curbs.

If this is a driveway entrance and approach to a filling station or to gasoline pumps, have you secured permission from the State This must be done before application will be approved by the

Indiana State Highway Commission.

mercially.

Purpose of Driveway:

If this application to construct a driveway entrance and approach is granted, the applicant agrees to the following applicable

Following Regulations officially Adopted in Accordance with Chapter 48, Acts 1939:—Section 3. The following general regu-

lations shall apply to all classes designated in Section 2.

(a) "No portion of any approach at the intersection of streets or highways shall encroach upon the right of way area between lines drawn to the pavement edge perpendicular to the right of way lines, from points on the right of way lines ten feet back from the point of intersection of the said right of way lines or their prolongation, where shoulder construction is used, or three feet back from said point of intersection where raised curbs are used: Provided that no part of any such approach shall encroach on any intersection turning area with an edge radius of fifty-five (55) feet or less or interfere with sight distance, easy turning or traffic movement within the highway or street intersection: Provided, further, that alleys shall not be considered to be streets and may, with the consent of local authorities, be included in approaches but in such cases the maximum dimensions shall not exceed those permitted for other approaches in the same class. Where the alley is not included the entrance must be a minimum of five (5) feet from the nearest boundary line of the alley. Any approach may, subject to other limitations in these regulations be constructed at any angle to the pavement edge from forty-five (45) degrees to ninety (90) degrees but none shall be permitted below forty-five (45) degrees.

(b) "No entrance shall be closer than five (5) feet to adjacent property line and no approach shall be so constructed that

any part of the same extends in front of property belonging to a person other than the permittee unless both property owners

sign a joint application for a permit.

(c) "Gasoline pumps or similar facilities served by such driveways and approaches shall be a minimum of ten (10) feet from the right of way line of the highway and no approach shall be constructed in front of any such facility which is less than ten (10) feet from the right of way line.

"All drainage pipes or tile used in the construction of driveways and approaches shall be a minimum of twelve (12) inches in diameter and as much larger as the Commission shall deem necessary for proper drainage, and on all new driveways and approaches shall be furnished by the permittee. All pipe or tile and other drainage structures used shall meet the approval of the

Commission as to type, quality, size and length.

(e) "All driveways and approaches shall be so constructed that they shall not interfere with drainage of the street or highway. If it is proposed to construct any portion of an approach on a slope or grade greater than fifteen (15) percent, the grade or slope shall be designated on the application. If no designation of grade is shown on the application, the approach shall not be constructed on a grade greater than fifteen (15) percent.

(f) "No more entrances or approaches shall be permitted connecting any state highway with any single property than are

necessary to adequately accommodate the traffic that may reasonably be expected.

"The construction of such driveways and approaches shall not interfere with any existing structure on any state highway right of way without specific permission in writing from the Commission or other owner thereof.

(h) "All entrances and approaches shall be so located as to provide adequate sight distance in both directions along the

highway for safe access to the highway without interfering with traffic on the highway.

(i) "No entrance or approach shall be located or constructed so as to interfere with or prevent the proper location of necessary highway signs.

(j) "The permittee shall assume responsibility for all maintenance of such approaches from the right of way line to a point thirty (30) inches from the edge of the traveled roadway. If the approach or driveway is built of loose aggregate, said aggregate shall be bound with some material so as to prevent loose aggregate from being carried onto the highway pavement, or the permittee shall keep the pavement free of loose aggregate at all times.

(k) "No such entrance or approach shall be relocated or its dimensions altered without written permission of the Com-

"On the day preceding the beginning of work under any permit for approach construction, the permittee shall secure special permission to proceed from the local Commission representative in charge.

"Use sketches below when possible unless you have a special case such as a radius of more than 55'at the corner of an intersecting road or where there are more than two driveways. Fill in all blanks in the sketch which applies to your driveway and answer all questions in square at lower right hand corner. STATE ROUTE (A) R/w Line \_Radius (B) Curb Sidewalk (A) (c.) ROUTE STATE (D) By or Property Line Property Line Radius ( ° ° Pumps (C) R/w Line Dimensions in Lineal Feet Dimensions in Lineal Feet (A) - 40' Maximum ROUTE (A) = 40' Maximum (B1) = 5' Radius Required (B) = 5' (B2)= 5' Maximum' ROUTE (c)=30' (C) = 30' Maximum Dimensions in Lineal Feet W/a(D) = 3'Minimum Curb (D)= 3' Minimum (A) = 70 Maximum (E) - 10'  $(B) = 20^{\circ}$ STATE (All of those which connect a state highway where (F)- 10'  $(C) = 30^{\circ}$ raised curb is used, with a residence, barn, private Required Negative Grade 1" per ft. (D) = 10' Minimum COMPLETELY garage or other improved property; and ordinarily used All of those which connect a state highway when raised only by the owner or occupant of the premises, his curbs are used with private or public property and which (Same as Class I but located where the state guests and necessary service vehicles.) are used for commercial purposes or which will ordinarihighway is constructed with shoulders without ly carry a much heavier traffic movement than Classes indicated) raised curbs.) (I and II.) CLASS-III OUT CLASS-II Shoulder CLASS~I or as +,01 £15% FILLED Type of road surface. RW Line-R/w Line -Width of road surface. Width of right of way\_ BE Approach Is entrance at least 5' from adjacent property line? STATE ROUTE: Pavement Edge STATE ROUTE Is any drain tile required?\_ MUST If drain tile is required, indicate the Size, Length and Kind. Edge Radius Radius inches, Length Radius (B) (B<sub>1</sub>) CORRUGATED METAL, REINFORCED CONCRETE OR VITRIFIED (C) (2) (C) CLAY. (Cross out all except the kind of pipe to be used.) Approximate grade of approach\_\_\_ SKETCH R/w Line Are there any railroad crossings closer than 500'?\_ Radius state distance. Is sight distance along State Road at least 500' each way from approach? ROUTE ROUTE Give type of material used in constructing driveway \_ Dimensions in Lineal Feet Dimensions in Lineal Feet If this is aggregate, how is it to be bound?\_ (A) = 70' Maximum (80' if single drive) (A)= 40 Max. where curb const is used STATE (B1) = 20 Is angle of your approach to edge of pavement 45° or more? (A)=70' " shoulder " " Lof Pavement (Bz) = 10'Is there a road intersection within 100'?\_ (B): 5' " " curb " " (83) = 30If so, give radius at road intersection. (B) = 20' shoulder " " " (B4) - 5'Does any part of approach encroach on this radius?\_ (C)= 30' · (C) = 40Note the following definitions: (D) = 10 Min where shoulder const is used (D) = 10 Minimum Property Line Drivoway (D) B Min where curb const. is used (E) = 10' a. Every way or place in private ownership and used for vehicular (F) = 10° travel. (Back of the State Highway right of way line.) Entrance Same as Class III but located where the state highway is constructed All of those connecting a state highway with vacant lots, fields a. The point of connection of the driveway and approach (at the and other unimproved property and not used commercially. with shoulders without raised curbs. State Highway right of way line). CLASS -V CLASS-IV a. A place improved for vehicular or pedestrian traffic on highway right of way which connects the travelled portion of the highway with a driveway or pedestrian walkway. (This includes the part on the right of way of the State Highway.) Driveway Entrances and Approaches must be separated with a traffic island which must be protected by one of the methods outlined in the application. This method must be indicated on this sketch

"The permittee shall remove or relocate any such entrances or approaches when requested to do so by the Commission in the interest of safety to highway traffic. For the purpose of Road or Bridge construction or improvement, said driveway entrances and approaches shall be removed at any time upon the request of the Indiana State Highway Commission. Permits issued for driveway entrances and approaches may be rescinded at any time by the Indiana State Highway Commission. Driveway entrances and approaches must be complete within one year after the permit is issued; otherwise, the permit will be cancelled.

(p) "All applications for permits under these regulations shall be made on a form prescribed by the Commission and be accompanied by clear drawings, preferably in ink, or blue prints, in quadruplicate, showing exact location of and naming:" (See reverse side. Where possible use sketch on back of this form using blanks to show:)

Driveway and Approaches

Property Lines
Right of Way Lines

Intersecting roads, streets or railways within five hundred (500) feet

Width of right of way

Width and type of road surface

Necessary and existing pipe, tile or other drains stating size and kind

Distance from right of way line to gasoline pumps and other structures

Type of surface and width of driveways Type of surface and width of approaches

Proposed turning radii

Proposed treatment of right of way area adjacent to (12)and between approaches

(13)Rate of slope or grade of approaches and driveways

On receipt and approval of such application, a tentative permit shall be granted for construction. A final permit will be granted when contruction has been completed to the satisfaction of the Commission.

"The Commission requires a performance bond with each application for a Commercial driveway. A minimum bond (q) "The Commission requires a performance bond with each application for a Commercial driveway. A minimum bond of \$2500.00 is required, and the amount to be increased to equal the estimated cost of that part of the project on the State Highway right-of-way. A bond may also be required at the Commission's discretion on applications for private driveways. Such bonds are required to insure compliance with all terms of the permit, and shall be released only when the work described

on the permit has been completed to the satisfaction of the Commission.

(r) "Any two approaches shall be at least ten (10) feet apart, and shall be so constructed as to clearly define the approach area and leave the area between and adjacent to the approaches unimproved for vehicular travel. Such unimproved area shall not be used by vehicles in any way and the addition of any material by the permittee to provide for such use is expressly pro-

Where curb cuts are required, raised curb shall be constructed around the five (5) feet radius between the pavement edge and approach edge on each side of the approach. Where curb cuts are not required, maximum permissible turning radii as provided in Section 5 may be used. Turning radii of adjacent approaches may be tangent at the same point on the right of way line or at the pavement edge; the two turning radii on one side of an approach may be tangent at the same point at the approach edge; thus making the unimproved area between approaches oval or circular in shape, with a minimum length of ten (10) feet, measured parallel to the pavement, at its longest point.

The right of way area adjacent to or between the approaches may be graded at the permittee's expense, subject to drainage requirements as determined by the Commission. The permittee may plant in this area, grass, flowers, or low growing shrubs that never attain sufficient height to obstruct clear vision in any direction. He shall prevent encroachment on this restricted area by such use of any of the following seven optional methods of protection as may be necessary to keep all vehicles in their proper paths. (Except in cases where it is more practical to use a longer radius as specified by the Commission).

(a) "Concrete curbs, six (6) inches high not closer to highway pavement than designed edge of shoulders or existing adjacent curb. Curb face to be sloped back at least two (2) inches. It shall be placed immediately adjacent to edge of approach pave-

(b) "Wood posts, five (5) feet apart, with tops five (5) inches to seven (7) inches in diameter, thirty (30) inches below and eighteen (18) inches above the ground; top six (6) inches painted black and next twelve (12) inches white, placed along the shoulder line only. One or more of the other options shall be used to supplement the line of posts if additional protection is need-

ed, placing them at the shoulder or right of way line and eighteen (18) inches from the approach surface.

(c) "Boulders, six to twelve (6 to 12) inches high, touching each other, placed in same relation to surface edge as in (b). They must be whitewashed or painted white.

(d) "Logs, six to eight (6 to 8) inches in diameter, firmly staked in place, whitewashed or painted white, and placed as nearly as possible as in (b). "Flexible Steel Guardrail, design and construction to comply with the Commission's standard specifications,

"Masonry walls not over eight (8) inches high, with face sloped back at least three (3) inches and placed as in (b).

"Low growing hedge plants or other evergreen or deciduous shrubs that do not grow to a height great enough to ob-

struct vision in any direction.

The drawing accompanying this application for permit shall show exactly how it is proposed to apply the method selected. If encroachment develops the need for additional protection it shall be provided promptly by the permittee.

If encroachment develops the need for additional protection it shall be provided promptly by the permittee. Section 5. "The driveways, entrances and approaches in the various classes shall be subject to the following: Special Require-

	Restrictions	-
Class I (	a) Maximum permitted width of approach	30 feet
Ò	b) Maximum turning radius at pavement edge	5 feet
Class II (	a) Maximum permitted width of approach	30 feet
	b) Maximum turning radius at pavement edge	20 feet
Class III (	Maximum permitted width of approach	30 feet
į (	b) Turning radius required at pavement edge	5 feet
į (	e) Maximum radius permitted at right of way	5 feet
Class IV (	) Maximum permitted width of approach	40 feet
(	o) Maximum turning Radii	
,	1. Between pavement edge and outside edge of approach	20 feet
	2. Between payement edge and inside edge of approach	10 feet
	(Inside edge is edge adjacent to separating area where two drives are constructed.)	
	3. Between right of way line and outside edge of approach	5 feet
	4. Between right of way line and inside edge of approach	30 feet
Class V (a	) Maximum permitted width of approach	30 feet
)	) Maximum turning radius at pavement edge	
,	1. Where curb construction is used	5 feet
	2. Where shoulder construction is used	20 feet"

		accordance			

Final approval will not be given until work as outlined above is completed to the satisfaction of the Indiana State Highway Commission. Applicant will notify State Highway Superintendent when said work is complete and ready for inspection. (City officials must approve this application if alley is used as part of private driveway.) If this is located inside city limits proper authority must also be secured from city.

Superintendent	Print	Name of Applicant or Name of Company
District Engineer		Signature of Applicant or Company Representative
Superintendent of Maintenance	Address	(Give Complete Post Office Address for Mailing Purposes)

Form M-173-E In Quadruplicate to Sub-Dist. Office nce to District Office and Central Office)

Number	
District	
uh District	



### APPLICATION FOR A PERMIT TO CONSTRUCT A DRIVEWAY ENTRANCE AND APPROACH

TO THE INDIANA STATE HIGHWAY COMMISSION

	Indianapolis, Indiana	Indiana	, 19
			,
l hereby n	nake application for a permit to con-	struct a driveway entrance and approach of	n—LUCATION: State Road No.
	, Sec, at the following	g described location:	
On which side	of road (North, South, East or West)	)?	
Is it, necessary	to make any cut in the right of way	outside the driveway limits?	If so, give exact LENGTH
	WIDTH	DISTANCE FROM EDGE RO	AD SURFACE
Class I ( ) oth serv Class II ( ) Class III ( ) whi I an Class IV ( ) Class V ( )	er improved property and ordinary u vice vehicles.  "Same as Class I but located where "All of those which connect a state ich are used for commercial purposes id II.  "Same as Class III but located w	highway where raised curb is used with a pased only by the owner or occupant of the pased only by the owner or occupant of the pased only by the owner or occupant of the pased on the state highway is constructed with or which will ordinarily carry a much heave where the state highway is constructed with the state highway is constructed with the state highway is constructed with the state highway is constructed with the state highway is constructed with the state highway is constructed with the state highway is constructed with the state highway with vacant lots, fields and other unimpass.	ders without raised curbs.  h private or public property and ier traffic movement than Classes  h shoulders without raised curbs.
Purpose of Dri	iveway:		
If this is a driv	veway entrance and approach to a fil	lling station or to gasoline pumps, have you	secured permission from the State
Fire Marshal's	Office ?	This must be done before app	olication will be approved by the
	Highway Commission. plication to construct a driveway ent	trance and approach is granted, the applicant	agrees to the following applicable
provisions:	-		
Following	Regulations officially Adopted in Acoply to all classes designated in Section	ccordance with Chapter 48, Acts 1939:—Section 2	ion 3. The following general regu-
(a) "No r	portion of any approach at the inters	on 2. Section of streets or highways shall encroach	n upon the right of way area be-

lat back from the point of intersection of the said right of way lines or their prolongation, where shoulder construction is used, or three feet back from said point of intersection where raised curbs are used: Provided that no part of any such approach shall

encroach on any intersection turning area with an edge radius of fifty-five (55) feet or less or interfere with sight distance, easy turning or traffic movement within the highway or street intersection: Provided, further, that alleys shall not be considered to be streets and may, with the consent of local authorities, be included in approaches but in such cases the maximum dimensions shall not exceed those permitted for other approaches in the same class. Where the alley is not included the entrance must be a minimum of five (5) feet from the nearest boundary line of the alley. Any approach may, subject to other limitations in these regulations be constructed at any angle to the pavement edge from forty-five (45) degrees to ninety (90) degrees but none shall be permitted below forty-five (45) degrees.

(b) "No entrance shall be closer than five (5) feet to adjacent property line and no approach shall be so constructed that any part of the same extends in front of property belonging to a person other than the permittee unless both property owners sign a joint application for a permit.

(c) "Gasoline pumps or similar facilities served by such driveways and approaches shall be a minimum of ten (10) feet from the right of way line of the highway and no approach shall be constructed in front of any such facility which is less than ten (10) feet from the right of way line.

(d) "All drainage pipes or tile used in the construction of driveways and approaches shall be a minimum of twelve (12) inches in diameter and as much larger as the Commission shall deem necessary for proper drainage, and on all new driveways and approaches shall be furnished by the permittee. All pipe or tile and other drainage structures used shall meet the approval of the

commission as to type, quality, size and length.

(e) "All driveways and approaches shall be so constructed that they shall not interfere with drainage of the street or highway. If it is proposed to construct any portion of an approach on a slope or grade greater than fifteen (15) percent, the grade or slope shall be designated on the application. If no designation of grade is shown on the application, the approach shall not be constructed on a grade greater than fifteen (15) percent.

(f) "No more entrances or approaches shall be permitted connecting any state highway with any single property than are necessary to adequately accommodate the traffic that may reasonably be expected.

(g) "The construction of such driveways and approaches shall not interfere with any existing structure on any state highway right of way without specific permission in writing from the Commission or other owner thereof.

(h) "All entrances and approaches shall be so located as to provide adequate sight distance in both directions along the

highway for safe access to the highway without interfering with traffic on the highway.

(i) "No entrance or approach shall be located or constructed so as to interfere with or prevent the proper location of neces-

sary highway signs. (j) "The permittee shall assume responsibility for all maintenance of such approaches from the right of way line to a point thirty (30) inches from the edge of the traveled roadway. If the approach or driveway is built of loose aggregate, said aggre-

gate shall be bound with some material so as to prevent loose aggregate from being carried onto the highway pavement, or the permittee shall keep the pavement free of loose aggregate at all times.

(k) "No such entrance or approach shall be relocated or its dimensions altered without written permission of the Com-

mission.

"On the day preceding the beginning of work under any permit for approach construction, the permittee shall secure special permission to proceed from the local Commission representative in charge.

"Use sketches below when possible unless you have a special case such as a radius of more than 55' at the corner of an intersecting road or where there are more than two driveways. Fill in all blanks in the sketch which applies to your driveway and answer all questions in square at lower right hand corner. STATE ROUTE R/w Line \_Radius (B) Curb Sidewalk (A) (c.) STATE ROUTE (D) Property Line W or Property Line Radius (E) Radius Pumps (c) R/w Line Dimensions in Lineal Feet Dimensions in Lineal Feet (A) = 40' Maximum ROUTE (A) = 40' Maximum (B1) = 5' Radius Required (B) = 5'(Bz)= 5' Maximum' ROUTE (C) = 30'(C)= 30' Maximum Dimensions in Lineal Feet W/g (D) = 3'Minimum (D)= 3' Minimum (A) = 70 Maximum (E) - 10'  $(B) = 20^{\circ}$ STATE (All of those which connect a state highway where (F) - 10'(C)= 30° Required Negative Grade 1" per ft.) raised curb is used, with a residence, barn, private (D)= 10' Minimum COMPLETELY garage or other improved property; and ordinarily used All of those which connect a state highway when raised only by the owner or occupant of the premises, his curbs are used with private or public property and which (Same as Class I but located where the state guests and necessary service vehicles.) are used for commercial purposes or which will ordinarihighway is constructed with shoulders without ly carry a much heavier traffic movement than Classes or as indicated) raised curbs.) (I and II.) OUT CLASS-II CLASS - III Shoulder CLASS~I +,01 (±15% FILLED Type of road surface. R/w Line R/W Line-Width of road surface. Width of right of way... BE Approach Is entrance at least 5' from adjacent property line? STATE ROUTE: Pavement Edge-STATE ROUTE Is any drain tile required?\_ MUST (D) If drain tile is required, indicate the Size, Length and Kind. Edge Radius Radius inches, Dength Radius (8) CORRUGATED METAL, REINFORCED CONCRETE OR VITRIFIED Radius (83) (C) (C) (c) CLAY. (Cross out all except the kind of pipe to be used.) -Radius Approximate grade of approach\_ R/w Line P/w Line SKETCH Are there any railroad crossings closer than 500'? Radius state distance Is sight distance along State Road at least 500' each way from approach? ROUTE. ROUTE Give type of material used in constructing driveway \_\_\_ Dimensions in Lineal Feet Dimensions in Lineal Feet If this is aggregate, how is it to be bound ?\_ (A) = 70' Maximum (80' if single drive) (A)= 40' Max, where curb const. is used. STATE (B<sub>1</sub>) - 20 Is angle of your approach to edge of pavement 45° or more? STATE (A)=70' \* shoulder \* \* Lof Pavement (Bz) = 10' Is there a road intersection within 100'?\_ (B): 5' " curb " " "  $(B_3) = 30$ (B) = 20 " shoulder " " " If so, give radius at road intersection \_ (B4) - 5Does any part of approach encroach on this radius? (C) = 30(C) = 40' Note the following definitions: (D) . 10 Min where shoulder const is used (D) = 10 Minimum Driveway (D) - 3 Min where curb const. is used a. Every way or place in private ownership and used for vehicular (F) = 10'travel. (Back of the State Highway right of way line.) Entrance Same as Class III but located where the state highway is constructed All of those connecting a state highway with vacant lots, fields a. The point of connection of the driveway and approach (at the with shoulders without raised curbs. and other unimproved property and not used commercially. State Highway right of way line). CLASS-IV CLASS ~ V Approach a. A place improved for vehicular or pedestrian traffic on highway right of way which connects the travelled portion of the highway with a driveway or pedestrian walkway. (This includes the part on the right of way of the State Highway.) Driveway Entrances and Approaches must be separated with a traffic island which must be protected by one of the methods outlined in the application. This method must be indicated on this sketch.

"The permittee shall remove or relocate any such entrances or approaches when requested to do so by the Commission in the interest of safety to highway traffic. For the purpose of Road or Bridge construction or improvement, said driveway entrances and approaches shall be removed at any time upon the request of the Indiana State Highway Commission. Permits issued for driveway entrances and approaches may be rescinded at any time by the Indiana State Highway Commission. Driveway entrances and approaches must be complete within one year after the permit is issued; otherwise, the permit will be cancelled.

(p) "All applications for permits under these regulations shall be made on a form prescribed by the Commission and be accompanied by clear drawings, preferably in ink, or blue prints, in quadruplicate, showing exact location of and naming:" (See reverse side. Where possible use sketch on back of this form using blanks to show:)

Driveway and Approaches

Property Lines Right of Way Lines

Intersecting roads, streets or railways within five hundred (500) feet

Width of right of way

Width and type of road surface

Necessary and existing pipe, tile or other drains stat-

(8) Distance from right of way line to gasoline pumps and other structures

Type of surface and width of driveways Type of surface and width of approaches

Proposed turning radii

Proposed treatment of right of way area adjacent to

and between approaches (13)Rate of slope or grade of approaches and driveways

On receipt and approval of such application, a tentative permit shall be granted for construction. A final permit will be granted when contruction has been completed to the satisfaction of the Commission.

"The Commission requires a performance bond with each application for a Commercial driveway. A minimum bond of \$2500.00 is required, and the amount to be increased to equal the estimated cost of that part of the project on the State Highway right-of-way. A bond may also be required at the Commission's discretion on applications for private driveways. Such bonds are required to insure compliance with all terms of the permit, and shall be released only when the work described

on the permit has been completed to the satisfaction of the Commission.

(r) "Any two approaches shall be at least ten (10) feet apart, and shall be so constructed as to clearly define the approach area and leave the area between and adjacent to the approaches unimproved for vehicular travel. Such unimproved area shall not be used by vehicles in any way and the addition of any material by the permittee to provide for such use is expressly pro-

"Where curb cuts are required, raised curb shall be constructed around the five (5) feet radius between the pavement edge and approach edge on each side of the approach. Where curb cuts are not required, maximum permissible turning radii as provided in Section 5 may be used. Turning radii of adjacent approaches may be tangent at the same point on the right of way line or at the pavement edge; the two turning radii on one side of an approach may be tangent at the same point at the approach edge; thus making the unimproved area between approaches oval or circular in shape, with a minimum length of ten (10) feet, measured parallel to the pavement, at its longest point.

The right of way area adjacent to or between the approaches may be graded at the permittee's expense, subject to drainage requirements as determined by the Commission. The permittee may plant in this area, grass, flowers, or low growing shrubs that never attain sufficient height to obstruct clear vision in any direction. He shall prevent encroachment on this restricted area by such use of any of the following seven optional methods of protection as may be necessary to keep all vehicles in their proper paths. (Except in cases where it is more practical to use a longer radius as specified by the Commission).

(a) "Concrete curbs, six (6) inches high not closer to highway pavement than designed edge of shoulders or existing adjacent curb. Curb face to be sloped back at least two (2) inches. It shall be placed immediately adjacent to edge of approach pavement.

(b) "Wood posts, five (5) feet apart, with tops five (5) inches to seven (7) inches in diameter, thirty (30) inches below and eighteen (18) inches above the ground; top six (6) inches painted black and next twelve (12) inches white, placed along the shoulder line only. One or more of the other options shall be used to supplement the line of posts if additional protection is need-

'ed, placing them at the shoulder or right of way line and eighteen (18) inches from the approach surface.

(c) "Boulders, six to twelve (6 to 12) inches high, touching each other, placed in same relation to surface edge as in (b).

They must be whitewashed or painted white. "Logs, six to eight (6 to 8) inches in diameter, firmly staked in place, whitewashed or painted white, and placed as nearly as possible as in (b).

"Flexible Steel Guardrail, design and construction to comply with the Commission's standard specifications.

"Masonry walls not over eight (8) inches high, with face sloped back at least three (3) inches and placed as in (b).

"Low growing hedge plants or other evergreen or deciduous shrubs that do not grow to a height great enough to obstruct vision in any direction.

The drawing accompanying this application for permit shall show exactly how it is proposed to apply the method selected. If encroachment develops the need for additional protection it shall be provided promptly by the permittee.

Section 5. "The driveways, entrances and approaches in the various classes shall be subject to the following: Special Require-

ments and Restrictions Maximum permitted width of approach. Class 30 feet Maximum turning radius at pavement edge. 5 feet Class II Maximum permitted width of approach \_30 feet Maximum turning radius at pavement edge  $_{20}$  feet Class III Maximum permitted width of approach\_ \_30 feet Turning radius required at pavement edge. 5 feet Maximum radius permitted at right of way. 5 feet Maximum permitted width of approach\_ Class IV \_40 feet Maximum turning Radii Between pavement edge and outside edge of approach 20 feet Between pavement edge and inside edge of approach. \_10 feet (Inside edge is edge adjacent to separating area where two drives are constructed.) Between right of way line and outside edge of approach 5 feet Between right of way line and inside edge of approach \_30 feet Maximum permitted width of approach\_ \_30 feet Maximum turning radius at pavement edge Where curb construction is used\_ 5 feet Where shoulder construction is used \_20 feet"

is sketch attached in accords	ance with Section 5 (p):	· · · · · · · · · · · · · · · · · · ·	
Final approval will not be gi	ven until work as outlined above is	completed to the satisfaction of	of the Indiana State Highway Com-
mission. Applicant will notif	fy State Highway Superintendent	when said work is complete and	l ready for inspection. (City officials
must approve this application	n if alley is used as part of priva	te driveway.) If this is located	inside city limits proper authority

<u> </u>	Print Name of Applicant or Name of Company
Superintendent	
District Engineer	Signature of Applicant or Company Representative
<u> </u>	Address
Superintendent of Maintenance	(Give Complete Post Office Address for Mailing Purposes

Form M-173-E 10M-5-61 (In Quadruplicate to Sub-Dist. Office Thence to District Office and Central Office)

Number		 <del></del>
District		
Cul District	•	



### APPLICATION FOR A PERMIT TO CONSTRUCT A DRIVEWAY ENTRANCE AND APPROACH

TO THE INDIANA STATE HIGHWAY COMMI- Division of Maintenance Indianapolis, Indiana	Indiana	, 19
I hereby make application for a permit to cons	struct a driveway entrance and approach on—LOCA g described location:	TION: State Road No.
On which side of road (North, South, East or West)		
Is it necessary to make any cut in the right of way of	outside the driveway limits? If	so, give exact LENGTH
WIDTH	DISTANCE FROM EDGE ROAD SUR	FACE
Indicate with a check mark class applied for:—Class I ( ) "All of those which connect a state	highway where raised curb is used with a residence, used only by the owner or occupant of the premises, h	barn, private garage or

01455	•	mercially."	mose connecting	a state nighway	** 1 011	vacant 1005, nerus una ouner	unimproved proj	, , , , , , , , , , , , , , , , , , ,	
Purpos	e o	f Driveway:_							—

"Same as Class III but located where the state highway is constructed with shoulders without raised curbs.

If this is a driveway entrance and approach to a filling station or to gasoline pumps, have you secured permission from the State Fire Marshal's Office? This must be done before application will be approved by the Indiana State Highway Commission.

If this application to construct a driveway entrance and approach is granted, the applicant agrees to the following applicable

Following Regulations officially Adopted in Accordance with Chapter 48, Acts 1939:—Section 3. The following general regu-

lations shall apply to all classes designated in Section 2. (a) "No portion of any approach at the intersection of streets or highways shall encroach upon the right of way area between lines drawn to the pavement edge perpendicular to the right of way lines, from points on the right of way lines ten feet back from the point of intersection of the said right of way lines or their prolongation, where shoulder construction is used, or three feet back from said point of intersection where raised curbs are used. Provided that no part of any such approach shall encroach on any intersection turning area with an edge radius of fifty-five (55) feet or less or interfere with sight distance, easy turning or traffic movement within the highway or street intersection: Provided, further, that alleys shall not be considered to

be streets and may, with the consent of local authorities, be included in approaches but in such cases the maximum dimensions shall not exceed those permitted for other approaches in the same class. Where the alley is not included the entrance must be a minimum of five (5) feet from the nearest boundary line of the alley. Any approach may, subject to other limitations in these regulations be constructed at any angle to the pavement edge from forty-five (45) degrees to ninety (90) degrees but none shall be permitted below forty-five (45) degrees.

(b) "No entrance shall be closer than five (5) feet to adjacent property line and no approach shall be so constructed that any part of the same extends in front of property belonging to a person other than the permittee unless both property owners sign a joint application for a permit.

(c) "Gasoline pumps or similar facilities served by such driveways and approaches shall be a minimum of ten (10) feet from the right of way line of the highway and no approach shall be constructed in front of any such facility which is less than ten (10) feet from the right of way line.

(d) "All drainage pipes or tile used in the construction of driveways and approaches shall be a minimum of twelve (12) inches in diameter and as much larger as the Commission shall deem necessary for proper drainage, and on all new driveways and approaches shall be furnished by the permittee. All pipe or tile and other drainage structures used shall meet the approval of the

Commission as to type, quality, size and length.

(e) "All driveways and approaches shall be so constructed that they shall not interfere with drainage of the street or highway. If it is proposed to construct any portion of an approach on a slope or grade greater than fifteen (15) percent, the grade or slope shall be designated on the application. If no designation of grade is shown on the application, the approach shall not be constructed on a grade greater than fifteen (15) percent.

(f) "No more entrances or approaches shall be permitted connecting any state highway with any single property than are necessary to adequately accommodate the traffic that may reasonably be expected.

"The construction of such driveways and approaches shall not interfere with any existing structure on any state high-

way right of way without specific permission in writing from the Commission or other owner thereof. (h) "All entrances and approaches shall be so located as to provide adequate sight distance in both directions along the

highway for safe access to the highway without interfering with traffic on the highway.

(i) "No entrance or approach shall be located or constructed so as to interfere with or prevent the proper location of necessary highway signs.

(j) "The permittee shall assume responsibility for all maintenance of such approaches from the right of way line to a point thirty (30) inches from the edge of the traveled roadway. If the approach or driveway is built of loose aggregate, said aggregate shall be bound with some material so as to prevent loose aggregate from being carried onto the highway pavement, or the permittee shall keep the pavement free of loose aggregate at all times.

(k) "No such entrance or approach shall be relocated or its dimensions altered without written permission of the Com-

"On the day preceding the beginning of work under any permit for approach construction, the permittee shall secure special permission to proceed from the local Commission representative in charge.

### Purdue University

ENGINEERING EXPERIMENT STATION LAFAYETTE, INDIANA

ADDRESS REPLY TO-HIGHWAY EXTENSION AND RESEARCH PROJECT FOR INDIANA COUNTIES CIVIL ENGINEERING BUILDING

April 29, 1961

File: 18-1

TO:

INDIANA COUNTY ROAD OFFICIALS

SUBJECT: Cumulative Bridge Funds

The increasing demands being placed on our Indiana county road systems gives rise to many varied problems dealing with the management and operation of our county highway departments. One of the problems which grows more critical each year is the great numbers of narrow, about-to-fall-in bridges on the county road systems that must either be repaired or replaced with new, modern bridge structures.

Attached herewith are two HERPIC Reports (4-61 and 5-61) which present useful information for Indiana County Road Officials on the establishment and use of Cumulative Bridge Funds. This is a highly important source of revenue for county bridge programs. Therefore the information presented in these two HERPIC Reports warrants the serious attention and review by all Indiana County Road Officials, particularly in those counties that have not established a Cumulative Bridge Fund or that have a low bridge levy and yearly income.

To assist County Road Officials in comparing their cumulative bridge fund - levy and income - with other counties in the State, a tabulation of this information from HERPIC Handbook of Facts and Figures on Indiana County Roads, has been reproduced on the back of this letter. An analysis of these data indicates that:

- (a) 22 counties have no Cumulative Bridge Fund
- (b) Of the 70 counties with Cumulative Bridge Funds, there are 29 whose yearly income from this source is less than the amount available from their County Federal-Aid apportionment.
- (c) Therefore, it is apparent that more than half (1/2) of the 92 counties do not have a Cumulative Bridge Fund sufficient to match their available County Federal-Aid funds.

To those counties that are considering an increase in their existing bridge levy or establishing a bridge levy for the first time, it is emphasized that the procedure should be started in the month of JUNE to allow sufficient time for publication, hearing and approval of the county bridge fund proposal in advance of the tax rate approval by County Council in September.

> Jean E. Hittle Research Engineer

HERPIC

JEH: cw

(over)

# Reproduced from HERPIC <u>Handbook of Facts and</u> Figures on Indiana County Roads, November 1960

Table 6—Cumulative Bridge Funds—Levy and Income by Counties

	1959 Total Net Value of Taxables State and County		ative Bridge nd Levy*	Yearly Income from Cumulative Bridge Fur	
County	(Assessed) (Valuation) Amount in \$1000	Year Approved	Amt. of Levy per \$100	Approx. Amount	Cum. Bridge x 100 1959 MVHA
Adams	\$ 45,673	59	15¢	8 68,509	19.8%
Allen	466,951	58	5	233,475	20.5
Bartholomew.	80,901	58	10	80,901	19.6
Benton	41,096	59	10	41,096	13.8
Blackford	26,231	59	10	26,231	14.6
Boone	54,375°	57	10	54,375	14.5
Brown	6,089	٠,		01,070	
Carroll	40,690	56	10	40,690	10.5
Càss	70,703	J		10,030	. 10.5
Clark	68,350	59	6	41,010	10.1
Clay	31,303	60	5	15,651	4.3
Clinton	60,188	58	5	30,094	7.4
Crawford	6,151		9	30,031	
Daviess	32,220	56	10	32,220	8.1
Dearborn	83,425	58	.5	41,712	13.9
Decatur	. 34,386	57	8	27,508	9.0
DeKalb	47,146	56	10	47,146	13.0
Delaware	153,826	59	7	107,678	14.9
Dubois	36,447	56	10	36,447	8.4
Elkhart	172,749	60	7	120,924	15.7
Fayette:	39,037	55	4	15,614	6.9
Floyd	54,831				
Fountain	32,158	59	5	16,079	5.0
Franklin	24,917	58	12	29,900	9.0
Fulton	36,460	56	7	25,522	7.0
Ġibson	48,151	∴:			
Grant	106,416		•		
Greene	28,658	59	15	42,987	8.6
Hamilton	74,915				
Hancock	46,834	58	5	23,417	7.2
Harrison	√ 16,396	57	8	13,116	3.4
Hendricks	60 701	57	. 17	103,324	26.8
Henry	70,882	55 .	5	35,441	7.7
Howard	112,077	60	13	145,700	33.9
Huntington	60,909	56	ĩŏ	60,909	16.7
Jackson	43,203	59	-10	43,203	10.4
asper	40,441	56	10	40,441	9.9
lay	39,375	58	15	59.062	17.0
efferson	84,411	56	1/2	4,220	1.4
ennings	15,763				
		**	5	27,753	8.5
Chncon	<u> </u>				
		55	-	47,700	
Knox	60,872				
Knox Kosciusko	60,872 89,630	57	3	26,889	4.5
Knox	60,872				

	1959 Total Net Value of Taxables State and County		ative Bridge d Levy*	, Yearly Income from Cumulative Bridge Fund	Percent Increase in Total Yearly Income to Co. Hwy. Dept.	
County	(Assessed) (Valuation) Amount in \$1000	Year Approved	Amt. of Levy per \$100	Approx. Amount	Cum. Bridge x 100 1959 MVHA	
Lawrence	40,786	59	12	48,943	,12.0	
Madison	167,782	60	10	167,782	21.5	
Marion	1,176,183	57	3	352,854	15.2	
Marshall	63,686	58	. 5	31,843	7.3	
Martin	9,360	59	10	9,360	3.5	
Miami	50,954	57	2	10,190	2.6	
Monroe	54,389	55	3	16,316	3.4	
Montgomery .	54,166					
Morgan	51,397	` 57	10	51,397	14.5	
Newton	33,385	59	10	33,385	11.9	
Noble	57,154	57	5	28,572	6.9	
Ohio	4,812	56	. 10	4,812	5.1	
Orange	18,254	30	10	1,012		
Owen	12,974	60	20	25,948	8.7	
Parke	25,741	. 60	20	51,482	14.9	
Perry:	15,723		٠,	-		
Pike	18,234			•••••		
Porter	87,509	.60	10	87,509	20.0	
Posey	32,993	56	5	16,496	4.5	
Pulaski	31,947	59	20.	63,894	17.1	
	43,106	56	20			
				86,212	23.4	
Randolph Ripley	57,233 32,222	57	8	45,786	11.0	
Ripley Rush	47,400	60	 4	10.060	5.5	
St. Joseph	370,991	57	10	18,960 370,991	32.7	
		rn	00	1		
Scott	14,775	57 60	. 20	29,550	16.1	
Shelby Spencer	59,909 21,038		5	29,954	7.6	
Starke	27,650	` 59	io	27,650	7.6	
Steuben	37,836			27,000	7.0	
Sullivan	36,859	*1"			-	
Switzerland .	7,268	• •		• • • • • •		
Tippecanoe	160,810	. 58	10	160,810	30.2	
Tipton	34,563	59	10	34,563	′ 12.9	
Union	15,986	56	20	31,972	20.9	
Vanderburgh.	247,634			4 .	•	
Vermillion	22,576	58	15	33,864	14.4	
Vigo	193,800	58	5	96,900	- 15.0	
Wabash	55,192	59	15	82,738	20.9	
Warren	24,354	57	20	48,708	19.7	
Warrick	40,249					
Washington .	21,238	56	10	21,238	5.3	
Wayne	122,433	56	71/2	91,825	19.6	
		50		31,043		
	40.842					
Wells	40,842 48,312	56	10	48.319	11.4	
	40,842 48,312 42,171	56 56	10 6	48,312 25,302	11.4 7.7	

Source: State Tax Commission
• (Data as of Sept. 1960)

### Description for Vacation Proceedings of Part of old State Highway 37-South

Eighteen (18) feet on each side of the following described center line. Beginning at a point that is 845 feet north and 920 feet east of the southwest corner of the southwest quarter of the southeast quarter of section 5-T7N;RlW, said point being the intersection of the center line of old State Highway number 37-South with the east right of way line of new State Highway 37-South; thence running north 16 degrees-15 minutes west for,170 feet; thence running north 6 degrees west for 115 feet; thence running north 7 degrees west for 250 feet; thence running north 21 degrees west for 835 feet; thence running north 72 degrees west for 480 feet and to the intersection of the center line of the old State Highway number 37-south with the east right of way line of way line of way number 37-south.

Civil Engineer & Surveyor

X / Sec

V. Surge 50.

DESCRIPTION FOR VACATION FROCKEDINGS - OF - CONTUR 1850 M. OLD SE. ZZ OR OLD S.K. #37

DESCRIBED CONTRE. DECIMINA AT A POINT
THAT IS 945 F. HORTH & 920 F. EAST OF THE
S.W. CAR OF SWILL OF THE SE. IA OF SECTION
B. TTHIS REW; SAID POINT BEAM THE INTERSECTION
OF THE CENTER LINE OF OLD STRONG 22 OR 37,
WITH THE FAST RIW LINE OF NEW 37-SOUTH;
THENCE RUMANG NIK-ISW FOR 170 FT, THENCE
RUMANG NEW FOR 115 FT; THENCE RUMANG
NTW FOR 250 FT, THENCE RUMANG NZIW FOR
E35 FT, THENCE RUMANG NTZW FOR 480 FT
TO THE INTERSECTION OF THE G OF THE
OLD S.R 22 OR 37 WITH THE EAST RIW LINE
OF NEW S.R. # 37 SOUTH-

SEPT. 1.1959 SO. POGERS STREET 41, 286.00 50000 B.T. MIX: 34,500,00 500000 STONE= 520.00 5,266,00 LID. ASP. GEADING. 59 000.00 1,000.00 ASPHOLT PAYER - 5000TON @ 100 = 5000.00 LABOR 5000000

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3/2 \$-12°0C. 3/4 P-120C STEEL DESIGN CHANGED, SEE HEXT SHEET. - 12% 9-03/ 84 SEMIELL, PTICAL TUNNEL SECTION - DIVA. WATHE S.

"05 = qa1 5/ N 0.0,21 \$ E . 133 i, ii "58.05 -qa1 50.21-4.5 27-12 \$ Source Ju7:1-,2

### Gentlemen:

Friday afternoon, May 27th, trucks operated by Paul Barnhart, Bural Boute #2, Gosport, Indiana, hauling Spriggs Dairy Products, and a truck driven by Ora Wittner, Montgomery, Ind. who was representing Oden Feed Mills of Oden, Indiana, attempted to pass in the Owen and Monroe County Bridge crossing White Biver on the Texas Bidge Boad, N.W. The collision was investigated by State Trooper, Donald Kuster.

This Bridge was damaged and will require examination of County Engineer in order to determine the damages involved, which in my opinion greatly reduces the load carrying strength of this structure.

I am mailing you this information for your future guidance regarding this damage claim.

All future correspondence pertaining to this accident should be handled through the following responsible Department Heads: Honroe County Commissioners, James Simpson, Chairman, Courthouse, Bloomington, Indiana; Owen County Commissioners, Crville Menson, Chairman, Courthouse, Spencer, Indiana; John Stapleton, County Engineer, Courthouse, Bloomington, Indiana; and Mr. Gilbert Knight, Monroe County Highway Supt., Courthouse, Bloomington, Indiana; or Owen County Highway Supt., Spencer, Indiana.

Very truly yours,

Selbert tright

Gilbert Knight Superintendent

GK:cc

Cys: Owen Co. Commissioners
John Stapleton, Engineer

Spriggs Dairy Oden Feed Mill J. FRANK REGESTER JAMES R. REGESTER REGESTER & REGESTER
ATTORNEYS AT LAW
1001/2 WEST SIXTH STREET
BLOOMINGTON, INDIANA
TELEPHONE EDISON 2-3334
February 13, 1961

Monroe County Plan Commission Bloomington, Indiana

Attention: Mr. John T. Stapleton, President

Mr. William J. Wayne, Secretary

### Gentlemen:

You have referred to me for examination a proposed Agreement between you and Kenneth L. Schellie and Associates.

Upon examination it is my opinion that this proposed Agreement is in proper form and may be executed by you without fear of incurring undue financial responsibility by yourselves or by the Board of Commissioners of the county of Monroe.

This opinion does not attempt to pass upon the expediency, or lack of expediency, of the program described and proposed under the terms of the Agreement heretofore referred and is based upon the

assumption that your Commission, in good faith, will attempt to secure, or has already secured, necessary appropriations from the Monroe County Council for the payment of the sums owing under the terms of this Agreement.

Respectfully submitted,

County Actorney, Montroe County,

JRR:mlh

### SPECIFICATIONS FOR BITUMINOUS COATED AGGREGATE

This item shall consist of crushed stone size No. 11, Indiana State Highway Specifications, coated with liquid asphalt, type RC-3.

This mixture shall be produced in a plant designed, coordinated and operated to produce uniformly a mixture within the tolerances as set out below.

A rotary drier of satisfactory design and capacity for properly drying the stone shall be provided. The drier shall be equipped with a mechanical feeder to insure a uniform flow into the drier.

Tanks for the storage of bituminous materials shall be equipped to heat the RC-3 to not less than 150 degrees or more than 200 degrees F. Heating shall be accomplished by steam coils and no flame shall come in contact with the heating coils or tank.

All pipe lines shall be steam jacketed to prevent heat loss. Storage tank capacity shall be sufficient for at least one days run. In armored thermometer reading from 100 to 300 degrees F shall be fixed in the bituminous material feed line in a suitable location near the mixer unit.

The plant shall be further equipped with an approved thermometer placed in the discharge chute of the dryer to register automatically the temperature of the heated aggregate.

The plant itself may be either a batch plant type or a continuous mixer type of plant as set out in Articles D804 and D805 in Indiana State Highway Commission Standard Specifications dated 1946.

The mixture shall consist of No. 11 stone properly coated with liquid asphalt RC-3 in proportions such as to give a bitumen content of 5 to 7% by weight. The stone shall be heated to not less than 100 degrees F or more than 165 degrees F when combined with the bituminous material. No appreciable separation of stone and bituminous material shall occur during handling.

The bituminous coated aggregate shall be weighed and paid for on a per ton basis and shall be full compensation for furnishing and heating the bituminous material, heating the aggregate, preparing the mixture and loading it in county trucks. The stone will be furnished by the county and delivered to the contractors bins if they are so arranged that the county trucks can dump directly therein without the use of elevating or hoisting equipment on the part of the county.

This material shall be furnished in amounts to be determined by the county and as directed by the county road superintendent.

### MONEDE COUNTY- ASPHALT

18' PAYEMENT - HOT MIX = 6 TON LOAD WILL SPREAD = 9 WIDE + TO IT LONG @ 3" THICK (134" COMPACTED,

DIE + REPLACE (INCLUDING REPLACING OF BLACK TOP)
12" WIDE DITCH @ 3/2 FT. DEEP = 4.75 PER FOOT

KINSEE PIKE BRIDGE

SPECIFICATIONS AND PROPOSAL

MONROE COUNTY BRIDGES

John T. Stapleton County Engineer

### INFORMATION FOR BIDDERS

- -1. Sealed proposals for the following described work will be received by the County Commissioners of Monroe County, Indiana at their office in the Court House until \_\_\_\_\_\_\_o'clock \_\_\_\_\_\_, of \_\_\_\_\_\_\_, at which place and hour they will be publicly opened and read.
- 2. <u>BIDS</u>: A unit price shall be submitted for each item as set out in the proposal. Each bid must be accompanied with a Certified Check or Bid Bond for 10% of the total amount.
- 3. <u>RIGHT TO REJECT BIDS</u>: The Board expressly reserves the right to reject any and/or all bids.
- 4. <u>SIGNATURES AND AFFIDAVIT</u>: Each bid must be signed in ink by the person or authorized officer or member of the firm or corporation making the bid.
- 5. <u>FILING BIDS</u>: All bids shall be filed with the County Commissioners on or before the day and hour mentioned above, and stated in the advertisement. No proposal presented after this time will be accepted.
- ESTIMATED QUANTITIES: Wherever quantities are listed, given or shown, they are the quantities estimated to be required to complete the work shown on the drawings and/or required by the specifications. Although these quantities are intended to be correct, they are not guaranteed to be so. Before using said list of quantities the contractor shall determine to his own satisfaction that they are correct and he shall not be entitled to any claim of loss because of his failure to do so. Changes in quantities due to any changes in the plans and specifications ordered by the Owner or to correction of errors in said drawings and specifications will be covered by change orders to this contract.
- 7. BONDS: The successful bidder, at the time of signing the contract, will be required to furnish a performance bond for 100% of the bid amount.
- C. EXAMINATION OF LOCATION AND PLANS: Plans are available at the office of the County Engineer, and bidders are expected to examine them before submitting their bids. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may choose, as to the accuracy of the estimates of the work to be done, and shall not at any time after the opening of the bids dispute or complain of the statement or estimate of the Engineer, nor assert that there was any misunderstanding as to the nature or amount of the work to be done.

- 9. <u>COMMENCING WORK</u>: The work, under these specifications shall be commenced within <u>so</u> days from the date of award of contract and shall be completed and ready for finel inspection within <u>so</u> days after award of the contract.
- 10. <u>COMPLAINCE WITH PROVISIONS</u>: All bids failing to comply with the provisions set forth herein may be rejected by the Owner.

### SPECIFICATIONS

for

### NORTH KINSER BRIDGE

### MONROE COUNTY, INDIANA

- 1. Indiana State Highway Department specifications are made a part hereof by reference hereto and shall take precedence over all others in so far as they pertain to materials and methods of construction; however, they shall not pertain to this job in so far as payment is concerned.
- 2. Bridge Decks to be furnished by Contractor shall be constructed of prestressed beams as shown by the drawings designed to support H 20 S 1644 AASHO LOADING in accordance with Recommendations for Prestressed Concrete by the ACI-ASCE Joint Committee #323.
- 3. FOUNDATIONS of abutments shall be constructed at elevations shown on plans. Concrete classes called for are 1963 Indiana State Highway Specifications, Section E5.
- 4. GUARD RAIL shall be 10 gauge beam type and shall come with a shop coat of red lead paint, and shall be furnished and crected by Contractor.
- 5. County to provide a wearing surface on new structure and perform any other roadway work required.
- 6. Removal of old structure to be done by Contractor. Plans indicate method and place of disposal.
- 7. Bituminous expansion joint shall be constructed at places as shown on the plans. No direct payment will be made for this item, but the cost thereof shall be included in the price of the prestressed concrete deck.
- 8. Payment for all excavating will not be made as such, but will be included in the payment for concrete.
- 9. Payment for piling, when required, will be based on actual footage using the unit price bid.
- 10. Permission to use explosives may be given, but must be approved by county engineer in writing.

### NON-COLLUSION AFFIDAVIT

The Bidder, by its officers and Agents, representatives present at the time of filing this bid, being duly sworn, on their oaths say that neither they nor any of them have in any way, directly or indirectly, entered into any agreement or agreements with any other bidder, or with any public official. Whereby such affiant or affiants or either of them, has paid or is to pay to such bidder or public official any sum of money, or has given or is to give to such other bidder or public official anything of value whatever, or such affiant or affiants or either of them has not directly or indirectly entered into any agrement or arrangement with any other bidder or bidders, which tends to or does lessen or destroy free competition in the letting of the Contract sought for the attached bids; that no inducement of any form or character other than that which appears upon the face of the bid will be suggested, offered, paid or delivered to any person whomsoever to influence the acceptance of said bid or awarding of the Contract; nor has this bidder any agreement or understanding of any kind whatsoever, with any person whomsoever to pay deliver to, or share with any other person in any way or manner, any of the proceeds of the contract sought by this bid.

Suscribed and sworn to before me by	
thisday of	, 19
My commission expires:	

### PROPOSAL FORM

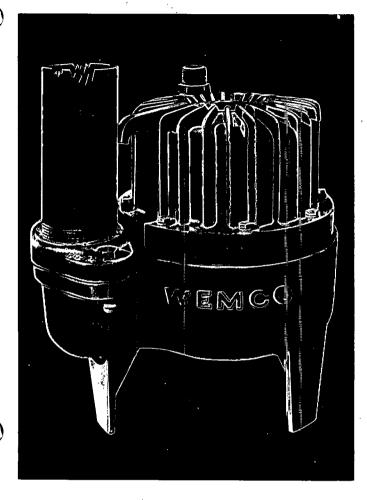
Pursuant to notice given, the undersigned proposes to perform and guarantee all things required to be performed or guaranteed to furnish all labor, and to furnish all materials and equipment except as otherwise provided, and do all other things necessary to complete the work required for the construction of North Kinser Bridge in accordance with the plans and specifications on file in the office of the county engineer.

Each proposal shall contain a 96A Form with unit prices listed thereon as indicated below. Unit prices shall be inserted in the proper spaces provided therefor and extension shall be made by multiplying said Unit Price by the estimated quantities listed on the form to get a cost for each constructed item. The costs of the several construction items then shall be totaled to obtain a lump sum bid for the work covered. All figures must be entered in type or ink.

BASE BID	QUANTITY	UNIT	UNIT Price	TOTAL Price
1. Prestressed concrete bridge declin place: 1 span @ 55'-0" and 1 span @ 45'-0" including bearing				
pads, dowels, tie rods, grout and curbs.	1	Lump Sum		٠.
2. Steel beam guard rail.	202	Lin.Ft.		
3. Class F concrete.	18.9	Cu.Yds.		<del></del>
4. Reinforcing steel.	2250	Lbs.	·	
5. Steel H piles furnished.	680	Lin.Ft.		
6. Steel H piles driven.	680	Lin.Ft.		
7. Removal of old structure	1	Lump Sum		·· .
ALTERNATE	TOTAL			
Deduct \$ if	Cianatura			

9530 WASHINGTON BLVD. INDIANAPOLIS 20, IND. VICTOR 6-2117





## SUBMERSIBLE

# TORQUE-FLOW PUMP

For submerged clean-out operations . . . sewage wet wells, digesters, grit chambers and other industrial applications.

This addition to the famous WEMCO Torque-Flow line of pumps incorporates all the outstanding advantages found in the standard dry pit models. Utilizing the revolutionary liquid impeller principle, which eliminates troublesome, close internal case clearances, common in most centrifugal pumps, this pump delivers the same never-clog, trouble-free service proven in thousands of applications where Torque-Flow pumps are being used. In addition, it is completely submersible.

### COMPACT, MOBILE DESIGN:

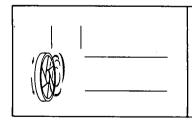
The pump is especially designed close coupled to the motor so that surface area adjacent to the sump or well can be kept c ear. The entire pump and motor assembly is lowered directly into the sump by means of lifting lugs which are cast as part of the motor housing. The complete unit may easily be moved from wet well to wet well affording a portable dewatering service.

### **UNOBSTRUCTED SUCTION AREA:**

The supporting legs are integrally cast as a part of the pump casing and are specially designed to elevate the intake port from the sump bottom. They are also shaped, tapered and surfaced to further lessen the possibility of congestion in this critical area.

### THE LIQUID IMPELLER PRODUCES FREE-FLOWING ACTION

.... what can go in .... will come out



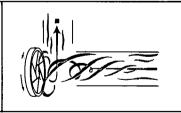
The impeller develops swirling vortex in fluid mass to be handled.



Vortex extends into sump, drawing particles and solids into pump casing.



Particles swirl in fast moving vortex without coming in contact with impeller.



Most particles discharged in less than one revolution because of centrifugal force of vortex.

### THE PRINCIPLE:

A recessed impeller located completely out of the flow pattern . . . a swirling motion transmitted to the fluid at the section line by impeller action . . . the suction and discharge waterway become one continuous open passage from suction flange to discharge flange.

### THE EFFECT:

Simplicity is the keynote. Particles and solids are drawn into the vortex of the swirling liquid, discharged with a centrifugal sweep from the open chamber — seldom touching the impeller.

### WHAT IT CAN DO:

In all phases of the treament operation, the WEMCO pump will:

Provide one of the most economical methods of digester cleanout because of the strong positive suction ability.

Handle any material that will enter the suction because of the completely open case.

Pump high solids content sludges and grit with a minimum of maintenance because of the absence of internal clearances.

Eliminate stand-by and down time due to stoppages.

Provide smooth, repair-free operation.

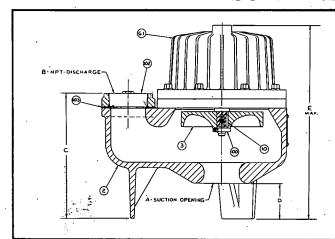
### TORQUE-FLOW SUBMERSIBLE PUMP SPECIFICATIONS

Pump casing is completely open from suction to discharge with no wearing rings or impeller face plates required.

The impeller is of patented recessed design. All internal case clearances are equal to the suction and discharge diameters so that all material entering the case will pass through the pump.

The pump is supported by legs which are an integral part of the case elevating the suction from the sump bottom to allow free passage of solids. The suction inlet is contoured to prevent material from collecting at this point.

### GENERAL ARRANGEMENT FOR 3" and 4" TORQUE-FLOW SUBMERSIBLE MODELS

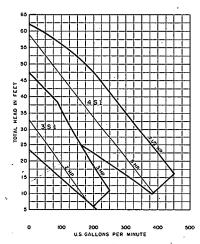


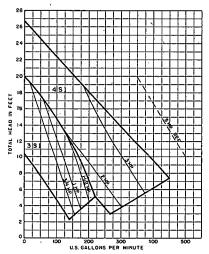
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PUMP	<u> </u>		D	IMENS	ONS IN	INCHES	•	•
SIZE	A	В	C	D	E	F	G	Н
3\$1 4\$1	3 4	3 4	10½ 13-11/16	3 4	22½ 28	8 9½	15-13/16 187⁄8	11½ 12¾

		•	
ITEM NO.	REQ'D	DESCRIPTION	
2 3 10 61 100 102 103	1 1 1 1 1 1	Case Impeller Key-Impeller Motor- Lockscrew-Impeller Discharge Flange Gasket-Disch. Flange	

### SELECTION CHART-ALL TORQUE-FLOW SUBMERSIBLE MODELS





### SUBMERSIBLE TORQUE-FLOW PUMP

1735 RPM

Maximum motor frame sizes

184 or 1811-215 or 2117

4\$1

Horsepowers shown are for 3 phase 60 cycle motors. For single phase motors maximum horsepowers will be 2 on 3S1 pump and 3



WESTERN MACHINERY COMPANY 650 FIFTH STREET, SAN FRANCISCO, CALIFORNIA

### SUBMERSIBLE TORQUE-FLOW PUMP Maximum motor frame sizes

1140 RPM

-1<del>84≅or≥181</del>1 215 or 2117

Horsepowers shown are for 3 phase 60 cycle motors. For single phase motors maximum horsepowers will be  $1\frac{1}{2}$  on 3S1 and 3 on

For more information on the new TORQUE-FLOW Submersible Pump contact your nearest Torque-Flow distributor, or write to:

### TORQUE-FLOW SUBMERSIBLE PUMP SPECIFICATIONS

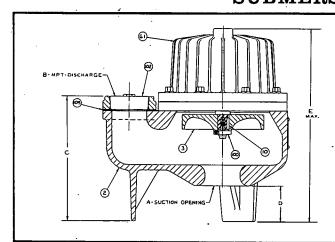
Pump casing is completely open from suction to discharge with no wearing rings or impeller face plates required.

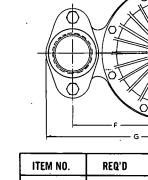
The impeller is of patented recessed design. All internal case clearances are equal to the suction and discharge diameters so that all

material entering the case will pass through the pump.

The pump is supported by legs which are an integral part of the case elevating the suction from the sump bottom to allow free passage of solids. The suction inlet is contoured to prevent material from collecting at this point.

## GENERAL ARRANGEMENT FOR 3" and 4" TORQUE-FLOW SUBMERSIBLE MODELS

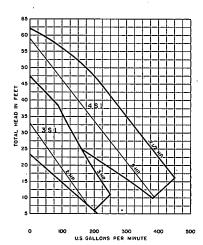




PUMP			D	IMENS	IONS IN	INCHES		
SIZE	A	В	C	D	E '	F	G	Н
3S1 4S1	3 4	3	10½ 13-11/16	3 4	22½ 28	8 9½	15-13/16 18%	111/8 123/4

ITEM NO.	REQ'D	DESCRIPTION
2	1	Case
3	1	Impeller
10	1	Key-Impeller
61	1	Motor-
100	1	Lockscrew-Impeller
102	1	Discharge Flange
103	1	Gasket-Disch. Flange

### SELECTION CHART-ALL TORQUE-FLOW SUBMERSIBLE MODELS



### SUBMERSIBLE TORQUE-FLOW PUMP

1735 RPM

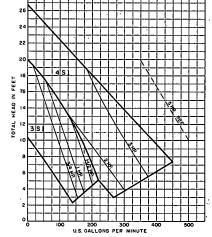
Maximum motor frame sizes

3S1

184 or 1811 215 or 2117

Horsepowers shown are for 3 phase 60 cycle motors. For single phase motors maximum horsepowers will be 2 on 3S1 pump and 3 on 4S1.

WEMCO



### SUBMERSIBLE TORQUE-FLOW PUMP

1140 RPM

Maximum motor frame sizes

3\$1

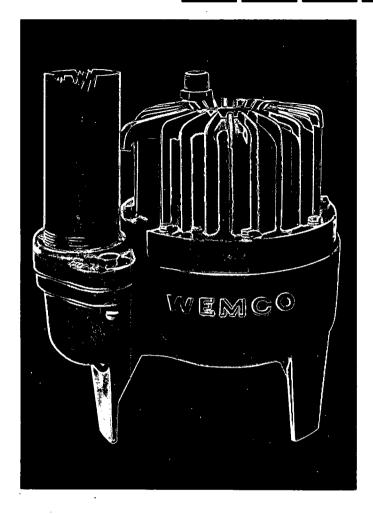
184 or 1811 215 or 2117

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A DIVISION OF

WESTERN MACHINERY COMPANY
650 FIFTH STREET, SAN FRANCISCO, CALIFORNIA



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For submerged clean-out operations . . . sewage wet wells, digesters, grit chambers and other industrial applications.

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#### COMPACT, MOBILE DESIGN:

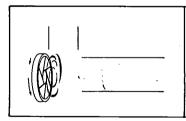
The pump is especially designed close coupled to the motor so that surface area adjacent to the sump or well can be kept clear. The entire pump and motor assembly is lowered directly into the sump by means of lifting lugs which are cast as part of the motor housing. The complete unit may easily be moved from wet well to wet well affording a portable dewatering service.

#### **UNOBSTRUCTED SUCTION AREA:**

The supporting legs are integrally cast as a part of the pump casing and are specially designed to elevate the intake port from the sump bottom. They are also shaped, tapered and surfaced to further lessen the possibility of congestion in this critical area.

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Eliminate stand-by and down time due to stoppages.

Provide smooth, repair-free operation.

No MHI STEPS (USE ALUNI. LADDER) Controls - Square D floot controls with start-stop switch also meluded will be a high water alarme due to not being able to put overflow to suitable detch. Controls will be boused in a sheet were with initally it tamper-proof.

## STATE OF INDIANA

Address Reply to:

Indiana State Board of Health 1330 West Michigan Street Indianapolis, Indiana



State Board of Health

May 26, 1960

Mr. John T. Stapleton Monroe County Court House Bloomington, Indiana

Dear Mr. Stapleton:

Re: South Rogers Street Sanitary Sewer

The plan and specifications for the subject sewer were reviewed and the following comments noted:

- 1. No return bend was noted on the force main at the discharge 
  manhole.
- 2. Drop manhole construction is recommended for influent sewers into the wetwell.
- 3. How will the pump be removed for service? No provisions, such as a mechanical joint, were noted on the discharge pipe. What 'provision will be made for entering the lift station?
- 4. In the event of a pump failure, is an overflow provided? What type of pump controls will be provided?

Your comments regarding the above points would be appreciated.

Very truly yours,

Oral H. Hert, Chief

Oul & Hect

Sewage Disposal Section

Division of Sanitary Engineering

HDW:mp

## STATE OF INDIANA

Address Reply to:

Indiana State Board of Health 1330 West Michigan Street Indianapolis, Indiana



State Board of Health

Mr. Mel Myers 702 Graham Drive Mloomington, Indiana

Dear Mr. Myers:

Re: Proposed Mobile Home Park

Your letter of May 19, 1960, addressed to the Indiana State Board of Health requesting information in regard to new mobile home park construction has been referred to me.

Plans for your proposed mobile home park must be submitted several weeks before you expect to undertake park construction in order to allow adequate time for us to review your drawings and advise you pertaining to the requirements of the Mobile Home Park Licensing Law and Regulations. Before developing plans, you should contact your local county and/or city planning commission concerning local zoning requirements.

We are sending you copies of the Mobile Home Park Licensing Law, Regulation 21, a manual for mobile home parks and an outline sheet for mobile home park plans to aid you in preparing satisfactory plans. We would recommend that plans and specifications be prepared by a registered engineer or architect proficient in this type of work.

The construction of your proposed park should not be undertaken until you receive a letter approving your plans from the Indiana State Board of Health. After plans have been approved, this office should be notified in time to make inspections of roughed-in plumbing and sewage disposal facilities before septic tanks, sewers, and secondary disposal systems are covered. Your request for an inspection should allow ample time for our representative to include same in his itinerary, which is planned one week in advance to conserve time and to economize on travel expenses.

Proposed Mobile Home Park

You should apply for a Mobile Home Park License after your park construction has been approved. Your Mobile Home Park License must be obtained before you park more than two mobile homes.

If you have any questions, do not hesitate to contact this office.

Very truly yours,

Chester H. Canham Sanitary Engineer Central Area

RW/zmb
co: County Planning Commission /
T. L. Wilson, M.D., County Health Officer.
Enclosures

## STATE OF INDIANA

Address Reply to:

Indiana State Board of Health 1330 West Michigan Street Indianapolis, Indiana



State Board of Health June 10, 1960

Mr. William Nicholson 327 West 1st Street Bloomington, Indiana

Dear Mr. Nicholson:

Re: Approval of Plans and Specifications for South Rogers Street Sewer and Lift Station and Force Main, Bloomington

You are hereby notified that the State Health Commissioner of the State of Indiana has this 10th day of June, 1960, approved the plans and specifications for the construction of the South Rogers Street sever and lift station and force main.

This project will consist of approximately 525 feet of 8-inch sewer, 200 feet of 4-inch force main, and a lift station with a submersible sewage pump. The 8-inch sever will discharge to an existing sever at the corner of Graham Avenue and Rogers Street.

This approval is given with the following conditions:

- 1. That the City of Bloomington agrees to the proposed connection.
- 2. That the City of Bloomington will provide necessary maintenance after construction.

Plans and specifications were prepared by John T. Stapleton, and submitted for approval on May 20, 1960, with additional information submitted on June 3, 1960.

This approval shall be void if construction is not begun before July 1, 1961.

Sincerely,

A. C. POUTT, M. D.

STATE HEALTH COMMISSIONER INDIANA STATE BOARD OF HEALTH

Approval No. 5750

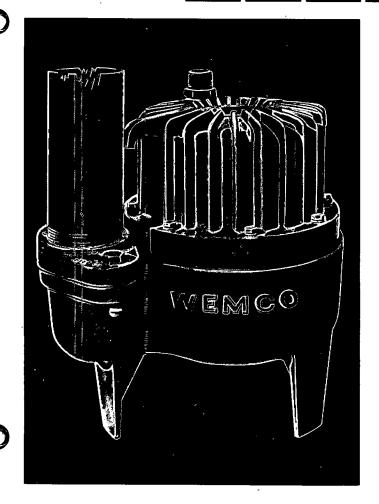
ce: Mr. John T. Stapleton

Board of Public Works, Bloomington

Public Health is "The art and science of preventing disease, prolonging life and promoting physical and mental efficienty through organized community effort."—C.-E. A. Winslow.

9530 WASHINGTON BLVD. INDIANAPOLIS 20, IND. VICTOR 6-2117

# WEMCO



# SUBMERSIBLE

# TORQUE-FLOW PUMP

For submerged clean-out operations . . . sewage wet wells, digesters, grit chambers and other industrial applications.

This addition to the famous WEMCO Torque-Flow line of pumps incorporates all the outstanding advantages found in the standard dry pjt models. Utilizing the revolutionary liquid impeller principle, which eliminates troublesome, close internal case clearances, common in most centrifugal pumps, this pump delivers the same never-clog, trouble-free service proven in thousands of applications where Torque-Flow pumps are being used. In addition, it is completely submersible.

#### COMPACT, MOBILE DESIGN:

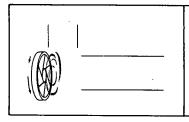
The pump is especially designed close coupled to the motor so that surface area adjacent to the sump or well can be kept clear. The entire pump and motor assembly is lowered directly into the sump by means of lifting lugs which are cast as part of the motor housing. The complete unit may easily be moved from wet well to wet well affording a portable dewatering service.

#### **UNOBSTRUCTED SUCTION AREA:**

The supporting legs are integrally cast as a part of the pump casing and are specially designed to elevate the intake port from the sump bottom. They are also shaped, tapered and surfaced to further lessen the possibility of congestion in this critical area.

### THE LIQUID IMPELLER PRODUCES FREE-FLOWING ACTION

.... what can go in .... will come out



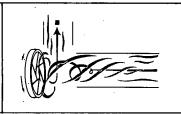
The impeller develops swirling vortex in fluid mass to be handled



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#### THE PRINCIPLE:

A recessed impeller located completely out of the flow pattern . . . a swirling motion transmitted to the fluid at the suction line by impeller action . . . the section and discharge waterway become one continuous open passage from suction flange to discharge flange.

#### THE EFFECT:

Simplicity is the keynote. Particles and solids are drawn into the vortex of the swirling liquid, discharged with a centrifugal sweep from the open chamber — seldom touching the impeller.

#### WHAT IT CAN DO:

In all phases of the treament operation, the WEMCO pump will:

Provide one of the most economical methods of digester cleanout because of the strong positive suction ability.

Handle any material that will enter the suction because of the completely open case.

Pump high solids content sludges and grit with a minimum of maintenance because of the absence of internal clearances.

Eliminate stand-by and down time due to stoppages.

Provide smooth, repair-free operation.

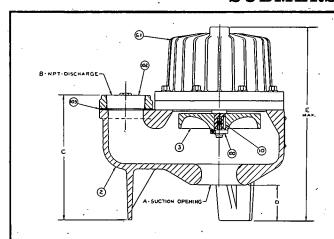
## TORQUE-FLOW SUBMERSIBLE PUMP SPECIFICATIONS

Pump casing is completely open from suction to discharge with no wearing rings or impeller face plates required.

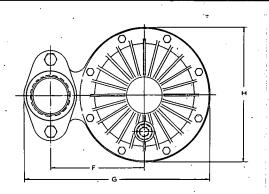
The impeller is of patented recessed design. All internal case clearances are equal to the suction and discharge diameters so that all material entering the case will pass through the pump.

The pump is supported by legs which are an integral part of the case elevating the suction from the sump bottom to allow free passage of solids. The suction inlet is contoured to prevent material from collecting at this point.

## GENERAL ARRANGEMENT FOR 3" and 4" TORQUE-FLOW SUBMERSIBLE MODELS

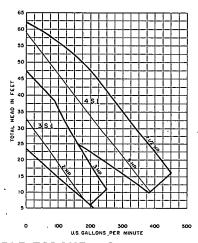


PUMP	DIMENSIONS IN INCHES							
SIZE	A	В	C	D	E	F	G	Н
3S1 4S1	3 4	3 4	10½ 13-11/16	3 4	22½ 28	8 9½	15-13/16 18%	11½ 12¾



ITEM NO.	REQ'D	DESCRIPTION	1
2 3 10 61 100 102 103	1 1 1 1 1 1	Case Impeller Key-Impeller Motor- Lockscrew-Impeller Discharge Flange Gasket-Disch. Flange	

### SELECTION CHART-ALL TORQUE-FLOW SUBMERSIBLE MODELS



#### SUBMERSIBLE TORQUE-FLOW PUMP Maximum motor frame sizes

1735 RPM

3\$1

184 or 1811

4S1

215 or 2117

Horsepowers shown are for 3 phase 60 cycle motors. For single phase motors maximum horsepowers will be 2 on 3S1 pump and 3



#### SUBMERSIBLE TORQUE-FLOW PUMP Maximum motor frame sizes

1140 RPM

3S1

184 or 1811

**4S1** 215 or 2117

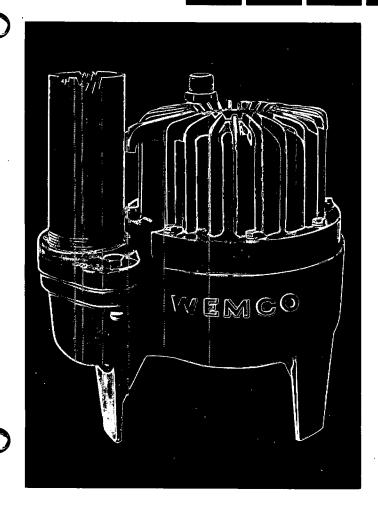
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For more information on the new TORQUE-FLOW Submersible Pump contact your nearest Torque-Flow distributor, or write to:

FIFTH STREET, SAN FRANCISCO, CALIFORNIA

W&W EQUIPMENT CO. 9530 WASHINGTON BLVD. INDIANAPOLIS 20, IND.

VICTOR 6-2117



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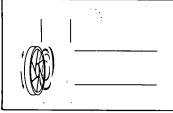
The pump is especially designed close coupled to the motor so that surface area adjacent to the sump or well can be kept clear. The entire pump and motor assembly is lowered directly into the sump by means of lifting lugs which are cast as part of the motor housing. The complete unit may easily be moved from wet well to wet well affording a portable dewatering service.

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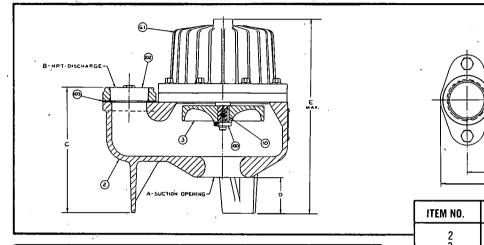
## TORQUE-FLOW SUBMERSIBLE PUMP SPECIFICATIONS

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## GENERAL ARRANGEMENT FOR 3" and 4" TORQUE-FLOW SUBMERSIBLE MODELS

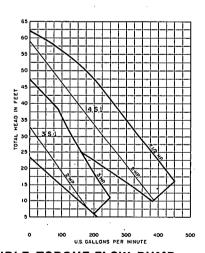


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ITEM NO.	REQ'D	DESCRIPTION	i
2 3 10 61 -100   102	1 1 1 1 1	Case Impeller Key-Impeller Motor- Lockscrew-Impeller Discharge Flange Gasket-Disch. Flange	

PUMP			D	IMENS	IONS IN	INCHES		
SIZE	A	В	C	D	E	F	G	Н -
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Maximum motor frame sizes

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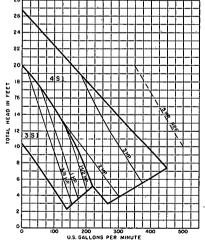
184 or 1811

215 or 2117

Horsepowers shown are for 3 phase 60 cycle motors. For single phase motors maximum horsepowers will be 2 on 3S1 pump and 3 on 4S1.



WESTERN MACHINERY COMPANY 650 FIFTH STREET, SAN FRANCISCO, CALIFORNIA



### SUBMERSIBLE TORQUE-FLOW PUMP

1140 RPM

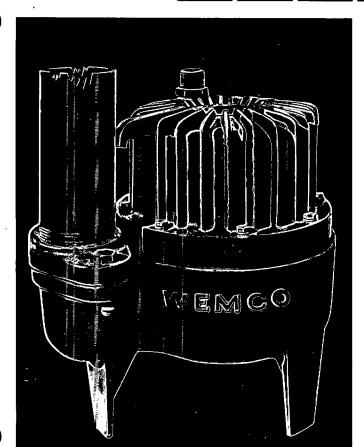
Maximum motor frame sizes 3S1

184 or 1811

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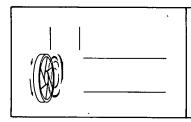
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A recessed impeller located completely out of the flow pattern . . . a swirling motion transmitted to the fluid at the suction line by impeller action . . . the suction and discharge waterway become one continuous open passage from suction flange to discharge flange.

#### THE EFFECT:

Simplicity is the keynote. Particles and solids are drawn into the vortex of the swirling liquid, discharged with a centrifugal sweep from the open chamber — seldom touching the impeller.

#### WHAT IT CAN DO:

In all phases of the treament operation, the WEMCO pump will:

Provide one of the most economical methods of digester cleanout because of the strong positive suction ability.

Handle any material that will enter the suction because of the completely open case.

Pump high solids content sludges and grit with a minimum of maintenance because of the absence of internal clearances.

Eliminate stand-by and down time due to stoppages.

Provide smooth, repair-free operation.

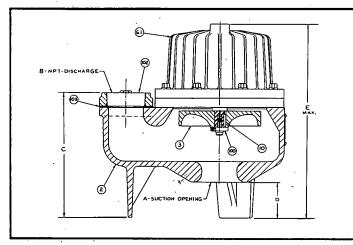
## TORQUE-FLOW SUBMERSIBLE PUMP SPECIFICATIONS

Pump casing is completely open from suction to discharge with no wearing rings or impeller face plates required.

The impeller is of patented recessed design. All internal case clearances are equal to the suction and discharge diameters so that all material entering the case will pass through the pump.

The pump is supported by legs which are an integral part of the case elevating the suction from the sump bottom to allow free passage of solids. The suction inlet is contoured to prevent material from collecting at this point.

## GENERAL ARRANGEMENT FOR 3" and 4" TORQUE-FLOW SUBMERSIBLE MODELS



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3/4	

ITEM NO.

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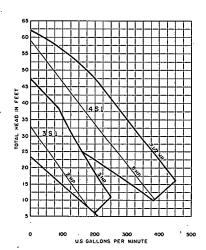
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DESCRIPTION Case Impeller Key-Impeller Motor-Lockscrew-Impeller Discharge Flange Gasket-Disch, Flange

PUMP			D	IMENS	IONS IN	INCHES	-	
SIZE	A	В	C	D	E	F	G	Н
3\$1 4\$1	3 4	3 4	10½ 13-11/16	3 4	22½ 28	8 9½	15-13/16 1878	11½ 12¾

#### SELECTION CHART-ALL TORQUE-FLOW SUBMERSIBLE MODELS





#### SUBMERSIBLE TORQUE-FLOW PUMP Maximum motor frame sizes

1735 RPM

3S1

184 or 1811

4\$1

215 or 2117

Horsepowers shown are for 3 phase 60 cycle motors. For single phase motors maximum horsepowers will be 2 on 3S1 pump and 3

FIFTH STREET, SAN FRANCISCO, CALIFORNIA

#### SUBMERSIBLE TORQUE-FLOW PUMP Maximum motor frame sizes

1140 RPM

184 or 1811

215 or 2117

Horsepowers shown are for 3 phase 60 cycle motors. For single phase motors maximum horsepowers will be  $1\frac{1}{2}$  on 3S1 and 3 on

For more information on the new TORQUE-FLOW Submersible Pump contact your nearest Torque-Flow distributor, or write to:

TO:

L. DERRELL WEAVER, Chairman Monroe County Traffic Commission

REFERENCE:

Problem of increased traffic flow of passenger vehicles and trucks to and from the J.R. Figg Co., FRANKLIN PLANT, and WESTINGHOUSE PLANT on Curry Pike two miles west of BLOOMINGTON, INDIANA.

Increased traffic has created somewhat of a bottleneck in the area of the intersection of VERNAL PIKE & CURRY PIKE.

The narrow overhead bridge over the MONON RAIL ROAD near the intersection is not recommended for heavy volumn of traffic nor heavy loaded truck traffic.

No exect traffic count of this intersection area has been made and the weight limigitations of the narrow bridge over the MONON RAIL ROAD is not known at present.

TWO BUGGESTED CORRECTIONS OF THIS MATTER ARE GIVEN:

- I. Building of short highway (about 700' to 800') from points I to G as shown by broken line on attached map. This land is owned by MONON WIAL ROAD and officials of the rail road have indicated that they would give land for road building purposes. The rail road is not in agreement to cutting down the grade and eliminating the narrow bridge which would require among other things a flasher light or rather red rail crossing light. This solution would take core of heavy traffic volumn and weight that moved north-west from the area.
- 2. A scond plan and more expensive would be to continue Curry Pike northward from Vernal Pike approximately 3/4 mile to Smith Pike as shown by dotted lines from point H to point B. This may be best solution later provided funds are avaliable. This would be direct line to statemed 46 from the rapid developing industrial area on Curry Pike.

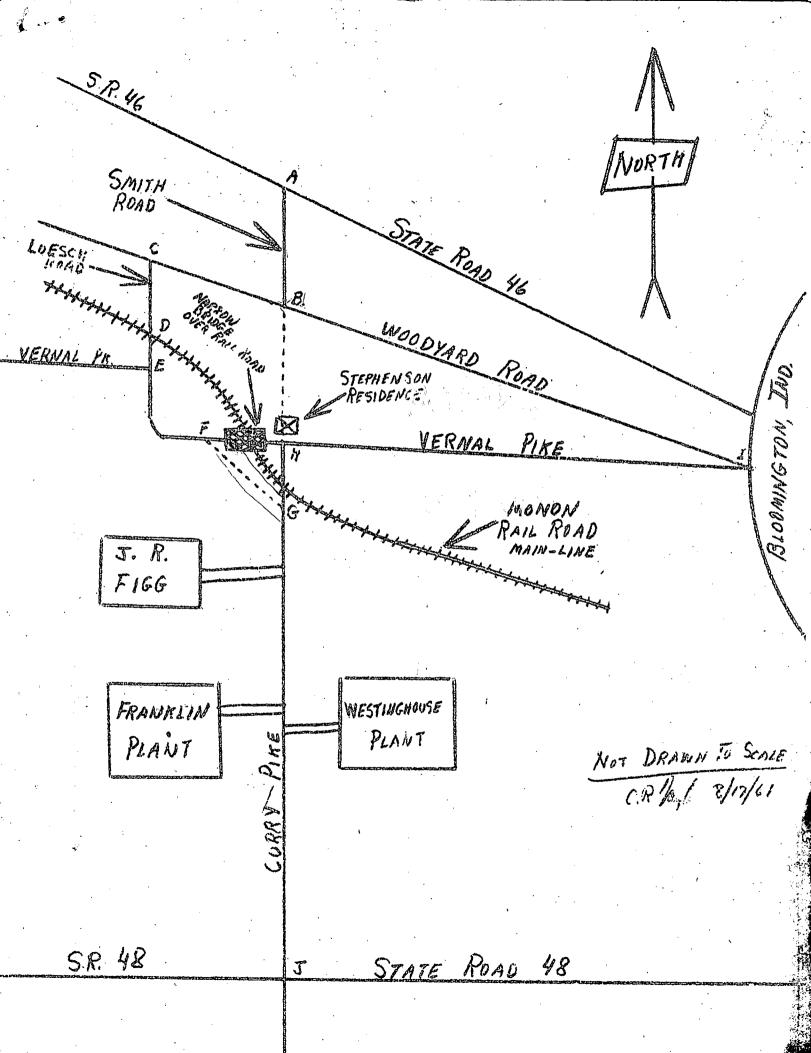
Distance from Point H to Point B by way of I is about one half mile further that from Point H to Point B by way of F, E, D, & C. There is a high grade crossing over the rail road at point D which is not desirable for truck traffic. The rail road signal light on Curry Pike at the Monon Rail road would stall be in use without any additional, signal if plan 1 or plan 2 were effected. Plan 1 could be put into effect with usage of couty equipment and manpower at nominal cost. However, Plan 2 has been estimated at possibly cost of \$35,000.00 not counting buying up property and house at the intersection H. Person making off-hand extimate does not wish to be identified.

This ## information is for your due consideration. No further action is anticipated on this particular projects unless further instructed.

RESPECTFULLY,

JAMES HALL, Member CHARLIE TAYLOR, Member

8/17/61



# Moders Pike Beidge

SPECIFICATIONS AND PROPOSAL

MONROE COUNTY BRIDGES

John T. Stapleton County Engineer

#### INFORMATION FOR BIDDERS

- -1. Sealed proposals for the following described work will be received by the County Commissioners of Monroe County, Indiana at their office in the Court House until o'clock of 19, at which place and hour they will be publicly opened and read.
- 2. <u>BIDS</u>: A unit price shall be submitted for each item as set out in the proposal. Each bid must be accompanied with a Certified Check or Bid Bond for 10% of the total amount.
- 3. <u>RIGHT TO REJECT BIDS</u>: The Board expressly reserves the right to reject any and/or all bids.
- 4. <u>SIGNATURES AND AFFIDAVIT</u>: Each bid must be signed in ink by the person or authorized officer or member of the firm or corporation making the bid.
- 5. <u>FILING BIDS</u>: All bids shall be filed with the County Commissioners on or before the day and hour mentioned above, and stated in the advertisement. No proposal presented after this time will be accepted.
- iven or shown, they are the quantities estimated to be required to complete the work shown on the drawings and/or required by the specifications. Although these quantities are intended to be correct, they are not guaranteed to be so. Before using said list of quantities the contractor shall determine to his own satisfaction that they are correct and he shall not be entitled to any claim of loss because of his failure to do so. Changes in quantities due to any changes in the plans and specifications ordered by the Owner or to correction of errors in said drawings and specifications will be covered by change orders to this contract.
- 7. BONDS: The successful bidder, at the time of signing the contract, will be required to furnish a performance bond for 100% of the bid amount.
- EXAMINATION OF LOCATION AND PLANS: Plans are available at the office of the County Engineer, and bidders are expected to examine them before submitting their bids. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may choose, as to the accuracy of the estimates of the work to be done, and shall not at any time after the opening of the bids dispute or complain of the statement or estimate of the Engineer, nor assert that there was any misunderstanding as to the nature or amount of the work to be done.

- 9. <u>COMMENCING WORK</u>: The work, under these specifications shall be commenced within \_\_\_\_\_\_ days from the date of award of contract and shall be completed and ready for finel inspection within \_\_\_\_\_\_ days after award of the contract.
- 10. <u>COMPLAINCE WITH PROVISIONS</u>: All bids failing to comply with the provisions set forth herein may be rejected by the Owner.

#### SPECIFICATIONS

for

### MOORE'S PIKE BRIDGE

#### MONROE COUNTY, INDIANA

- 1. Indiana State Highway Department specifications are made a part hereof by reference hereto and shall take precedence over all others in so far as they pertain to materials and methods of construction; however, they shall not pertain to this job in so far as payment is concerned.
- 2. Bridge Decks to be furnished by Contractor shall be constructed of prestressed beams as shown by the drawings designed to support H 20 S 1644 AASHO LOADING in accordance with Recommendations for Prestressed Concrete by the ACI-ASCE Joint Committee #323.
- 3. FOUNDATIONS of abutments shall be constructed at elevations shown on plans. Concrete classes called for are 1963 Indiana State Highway Specifications, Section E5.
- 4. GUARD RAIL shall be 10 gauge beam type and shall come with a shop coat of red lead paint, and shall be furnished and crected by Contractor.
- 5. County to provide a wearing surface on new structure and perform any other roadway work required.
- 6. Removal of old structure to be done by Contractor. Plans indicate method and place of disposal.
- 7. Bituminous expansion joint shall be constructed at places as shown on the plans. No direct payment will be made for this item, but the cost thereof shall be included in the price of the prestressed concrete deck.
- 8. Payment for all excavating will not be made as such, but will be included in the payment for concrete.
- 9. Payment for piling, when required, will be based on actual footage using the unit price bid.
- 10. Permission to use explosives may be given, but must be approved by county engineer in writing.

## NON-COLLUSION AFFIDAVIT

The Bidder, by its officers and
Agents, representatives present at the time of filing
this bid, being duly sworn, on their oaths say that
neither they nor any of them have in any way, directly
or indirectly, entered into any agreement or agreements
with any other bidder, or with any public official.
Whereby such affiant or affiants or either of them, has
paid or is to pay to such bidder or public official any
sum of money, or has given or is to give to such other
bidder or public official anything of value whatever,
or such affiant or affiants or either of them has not
directly or indirectly entered into any agrement or
arrangement with any other bidder or bidders, which
tends to or does lessen or destroy free competition in
the letting of the Contract sought for the attached bids;
that no inducement of any form or character other than
that which appears upon the face of the bid will be sug-
gested, offered, paid or delivered to any person whomso-
ever to influence the acceptance of said bid or awarding
of the Contract; nor has this bidder any agreement or
understanding of any kind whatsoever, with any person
whomsoever to pay deliver to, or share with any other
person in any way or manner, any of the proceeds of the contract sought by this bid.
The state of the brushing of the state of th

	· · · · · ·
Suscribed and sworn to before me by	
thisday of	
My commission expires:	

#### PROPOSAL FORM

Pursuant to notice given, the undersigned proposes to perform and guarantee all things required to be performed or guaranteed to furnish all labor, and to furnish all materials and equipment except as otherwise provided, and do all other things necessary to complete the work required for the construction of Moore's Pike Bridge in accordance with the plans and specifications on file in the office of the county engineer.

Each proposal shall contain a 96A Form with unit prices listed thereon as indicated below. Unit prices shall be inserted in the proper spaces provided therefore and extension shall be made by multiplying said Unit Price by the estimated quantities listed on the form to get a cost for each constructed item. The costs of the several construction items shall be totaled to obtain a lump sum bid for the work covered. All figures must be entered in type or ink.

		QUANTITY	UNIT	UNIT Price	TOTA Extir
in	Prestressed concrete bridge deck place: 1 span @ 24'-0" including ring pads, dowels, tie rods,				
	ut and curbs.	1	Lump Sum		demonstrated part of the 20 Transferred 21 to 10 Tr
2.	Steel beam guard rail.	48	Lin.Ft.		
3.	Class F Concrete	66.3	Cu.Yds.		
4.	Reinforcing steel.	7,320	Lbs.		
5,	Removal of old structure.	1	Lump Sum		
	·	TOTAL			
				<del></del>	

Signature

					**************************************
		#			
BIDDERS		LOCATION,	AMT.	ALN.	
INEDDLE BE	0.5.	KinsER PK	39,931.00	34,531.00	
		Moder's Px	12,282.471	11,682.47	lo
-		ANDERSON Rd.	17,005,87	16,009.87	- Cho
		CREOSOTE RA	11,390.20	10,190.201	
F199		KINSER PK			
CH)		MOURES PL.	- 1*		
		ANDERSON RO			
		CREOSOTE RD			
HOOLEY	,	KINSKE PK		,	
		Modee's PK.	/		4.7
		AHORRSON Rd			•
		CREOSOTE Rdi			
HUBERON	,	KINSKE PK	34, 920.00		
		Moore's PK	15,761,20		· · · · · · · · · · · · · · · · · · ·
		AHDEESON Rd.	19,537.80		
L		CREOSON POL	14,660.00	1	
		KINSEE PK.	30,543.00	<i>y</i>	
COMMERS		Model'S PK	12,502.60		
/		AHDERSON. Rd.	15, 711. 20 V.	ever 1512.	PILING - 7.00 = 630,00
		CEROSOTE ROL	10, 301.00		MARINE TO SERVICE
James of	·			*	<u> </u>
SEAMON (M. 8	5)	KINSER RIL		,	
CHO		MODER'S PIL	11,714.85		
5.		ALIGERSON Rd.			
		CREOSOTE Rd	10, 193.00	: ·	
ALIG.		KIHISEE PK	30,800.00V		
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Flood Control and Water Resources Commission
606 INDIANA STATE OFFICE BUILDING

ITTOI UND WATER RESOURCES COMING
INDIANA STATE OFFICE BUILDING
100 N. SENATE AVENUE
INDIANAPOLIS 4, INDIANA

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NO P.B. 390816 

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Mr. Brice F. Bender
Monroe County Courthouse
Bloomington, Indiana

#### INDIANA FLOOD CONTROL AND WATER RESOURCES COMMISSION

606 INDIANA STATE OFFICE BUILDING 100 NORTH SENATE AVENUE INDIANAPOLIS 4, INDIANA May 28, 1964

TELEPHONE: MELROSE 3-5267

Board of County Commissioners Monroe County County Courthouse Bloomington, Indiana

Gentlemen:

Enclosed is Certificate of Approval granted by the Commission at its meeting on May 22, 1964, and an Engineer's Report for the following:

Docket No.

Certificate of Approval issued to:

B-1387

Board of County Commissioners of Monroe County, for approval of plans to construct a bridge over Bean Blossom Creek, located about 2,000 feet downstream from State Road 37 near the center of sec. 8, T. 9 N., R. 1 W., about 4.6 miles north of Bloomington in Monroe County, Indiana.

Very truly yours,

William J. Andrews

Head, Engineering Services

Division

WJA:sh enclosures

cc: Brice F. Bender

## STATE OF INDIANA FLOOD CONTROL AND WATER RESOURCES COMMISSION

## Certificate of Approval

of

## Construction In A Floodway

This certificate is issued to sound of County to	nnissioners, Monroe County, Indiana
in accordance with an application dated	4
filed by	
for approval of plane to construct a bridge	over-Beam-Blossom-Uresky-lo-ated-about
2,000 feet downstream from State 6024-57	near-the center of sec. 5, 1
R. I W., about 4.6 miles north of Bloomin	igton in Monroe County, Indiana.
upon the finding by the Commission that the proposed we with flood control in the State, or adversely affect the efficient or constitute an unreasonable hazard to the safety of life or subject to the limitations and conditions stipulated below accordance with the plans, specifications, and other data ation from said plans unless the proposed change in pla writing by the State of Indiana acting by and through its	ciency of nor unduly restrict the capacity of the floodway reproperty. The Commission approves the proposed work, w, provided the project is constructed and maintained in a submitted with the application. There shall be no devi- tions shall first have been submitted to and approved in
LIMITATIONS AN	D CONDITIONS
"It is recommended that the application be	s approved under the condition that the
road across the flood plain be maintained	at its present elevations to provide
the necessary floodway for flood flows.	
Further limitations and conditions are that notice shall be of construction. This approval shall become void if common months of the date of this Certificate. The approximation application of the responsibility to obtain all other the effects of his project upon the safety of life and proper	onstruction of the project has not been started within opproval by the Commission does not relieve the person her permits, easements, or approvals nor of liability for
Approval Recommended:	Approved by the Commission:
J. Jerrey Chief Engineer	
	John E. Withell
Docket No. 5. 1387	Secretary

## INDIANA FLOOD CONTROL AND WATER RESOURCES COMMISSION INDIANAPOLIS, INDIANA

Docket No. B-1387

Date: May 12, 1964

#### ENGINEER'S REPORT

## MONROE COUNTY BRIDGE OVER BEAN BLOSSOM CREEK NEAR BLOOMINGTON, INDIANA

Application, Docket B-1387, dated May 7, 1954, has been submitted by Brice F. Bender in behalf of the Board of Commissioners of Monroe County, Indiana, for approval of plans to construct a bridge over Bean Blossom Creek.

The project is located about 2,000 feet downstream from State Road 37 near the center of sec. 8, T. 9 N., R. 1 W., about 4.6 miles north of Bloomington in Monroe County, Indiana.

The present structure is a covered bridge having a clear span of 72 feet. The superstructure will be removed and the present abutments will remain in place.

The proposed bridge will be a two-span deck-type, prestressed concrete structure 101 feet long. Span lengths will be 55 feet and 46 feet. The bridge will be built on a 0.0025 slope, without skew.

The pier will be a pile bent with a concrete cap. Every third pile will be vertical, the middle two being battered either way for lateral stability.

The abutments each will consist of a single row of vertical piling capped with a concrete seat behind the existing abutments, which will function as protection walls.

The low structure elevation of about 584.5 feet will be at the right end of the bridge. The left end of the bridge will be about 0.25 feet higher.

Total effective waterway opening through the bridge will be about 905 square feet. Above an elevation of 582.3 feet, an overflow area of undetermined size becomes effective on the right bank.

The drainage area at the project site is about 126 square miles, as determined from U. S. Geological Survey gaging records and planimetered areas from U. S. Geological Survey topographic quadrangles.

About 64 square miles of the drainage area are regulated to some extent by Lake Lemon (Bloomington Water Supply Reservoir) and another 8 square miles by Griffey Creek Reservoir.

Since the beginning of operation at Lake Lemon in April 1953, the largest discharge recorded at the gaging station at Dolan (drainage area, 100 square miles) was 8,530 cubic feet per second on June 23, 1960. Adjusting this discharge to the bridge site on the basis of square roots of drainage areas indicates an estimated discharge at the project site for that flood of about 9,600 cfs.

If a discharge of this magnitude were confined to the bridge opening, an average velocity of about 10.6 feet per second would be produced. This velocity would be great enough to produce considerable heading-up above the bridge and could be expected to damage the substructure of the bridge. However, it is also expected that the additional overflow area, which appears to extend along about 1,200 feet of roadway to the north and east, would reduce this computed velocity.

Larger floods than that of June 1960 can be expected. The storm of May 1956 and other very severe storms which have occurred since 1913 on the West Fork White River basin indicate that a peak discharge of about 14,000 cfs could reasonably be expected, stressing the necessity of maintaining the existing overflow area.

The waterway opening through the proposed bridge is no smaller than that provided beneath the former covered bridge. The Board of Commissioners for Monroe County has furnished a letter to the effect that the road across the flood plain will not be raised. Consequently, the overflow area that is available will be preserved.

D. W. Hook Engineer

#### RECOMMENDATION:

The proposed bridge alone will be inadequate to pass expected flood flows, but a wide overflow area is available which will bypass a large part of such flows around the bridge.

It is recommended that the application be approved under the condition that the road across the flood plain be maintained at its present elevations to provide the necessary floodway for flood flows.

J. I. Perrey Chief Engineer R.J. COONEY.

INATER SPECIFICATIONS

John Stapleton "Marlin Hills Josees"

#### MARLIN HILL WATER SYSTEM SPECIAL PROVISIONS WATER MAIN CONSTRUCTION

The following special provisions shall apply to the construction, testing, servicing methods and procedures to be followed in installing the several sizes of water mains connecting to the Bloomington Water Utility facilities.

## 1. Type of pipe and fittings:

- a. All pipe shall be Class 150 (and 250 as shown on plans) cast iron cement lined, centrifugally cast mechanical joint with lead tipped Basket, or slip joint with copper wedges all as specified in Federal Specifications WW-P-421. Pipe shall be tested to not less than 300 pounds (450 for Class 250), hydrostatic pressure.
- b. All fittings shall be Class 250 mechanical joint, cast iron with lead tipped gasket as specified in Federal Specifications WW-P-421.

#### 2. Gate Valves:

a. Gate valves shall have the iron body with bronge mounting type of construction, double disk type operation, designed for a working pressure of 150 pounds (250 for area requiring Class 250 pipe), shall have been tested to 300 pounds hydrostatic pressure (450 for Class 250) and shall have the non rising stem. All valves greater than 8% shall be installed in manhole having an inside diameter of 4:-6", a 22" heavy duty ring and cover assembly and set on a brick pier with operating nut 9" off center of manhole.

### 3. Hydrants:

a. Fire hydrants shall have a 5" steamer and 2,  $2\frac{1}{2}$ " inch hose connections with attached 6" valve designed for a working pressure of 150 pounds. Hydrant and branch shall have 42" cover, operating nut on steamer shall be a minimum of 6" behind face of curb, ring shall not be more than 3" above design grade, elbow shall be on solid ground, or on 6" of crushed stone but shall not set on solid stone, and shall be "kicked" by placing broken concrete, brick or concrete. Pit shall be filled to point 3" above elbow assembly with cresh stone.

#### L. "Kicker Size"

a. The following areas are required for poured concrete "kicker blocks" for the several sizes where 150 pound class pipe is specified on drawings and shall be poured against undisturbed earth, unless approved by City Engineer.

$\mathtt{Si}_{\mathbf{Z}}\mathtt{e}$ of $\mathtt{ppipe}$	Degree of bend or fitting	Area required
12" (150#)	900	36"x36"
8" (150#)	90° 45°, Tee & Plug 90° 45°, Tee & Plug	2lt".x5lt".
12" (250#)	45°, Tee & Plug	18"x18"
( <i>-</i> )	450, Tee & Plug	կ2"xկ2" 30"x30"
8" (250#) 6" (250#)	900 90	18"x18" 15"x15"

#### 5. Excavation:

All pipe, and hydrant branches shall be laid to a depth not less than that which results in 42" of cover. The width of trench shall be a minimum of 24" or outside diameter of pipe plus 16" whichever is greater in soil and outside diameter plus 8" or 24" whichever is the greater in rock excavation. The trench shall be excavated to a depth of the bowl of pipe except at joints and shall conform to shape of pipe. No cradles will be allowed.

Rock payment will be made on the basis of above and shall be 6" below bottom of pipe which 6" shall be refilled with #11 crushed stone, thoroughly tamped. Where blasting is necessary, special care shall be taken to protect life and property in conformance with all local and state laws governing such work. The City Engineer or his authorized representative shall be informed whenever blasting is to take place and all blasting shall be performed by an experienced "blast" technician.

All surplus material shall be spoiled in adjacent areas if area is not final graded and shall otherwise be removed from the site. All excavation within limits of creek or ditch shall have a minimum of 36" of cover and be encased in high early strength concrete having a width of twice the nominal pipe size and a depth of attleast 6" above the crown of the pipe.

#### 6. Installation

No pipe shall be installed in trench having free water standing therein. Trench shall be kept dry by pumping from sumps located to the side of the main excavation.

Pipe shall be handled in a careful manner at all times to avoid damage and in a manner recommended by the AWWA specifications. All pipe after delivery to the site and immediately prior to installation shall be checked for damage, and be thoroughly cleaned by swab using an approved soap compound.

All lines extending more than 72 feet beyond a hydrant shall be left in position that a corporation cock "blow-off" may be installed for line clearance. After an approved sterilization test is completed, the riser shall be removed, corporation stop "fouled" in shut position and backfilled.

#### 7. Pressure Test

Each section of main will be tested to the specific pressure established for the various classes and shall hold the pressure to the limits of the AWWA test. Any section of the system not passing this test shall be sectionalized and the failing joint or section of pipe replaced and the test repeated.

#### 8. Backfill:

All backfill shall be delayed until all pressure tests have been made and approved. The trench shall be backfilled in 6" layers and tamped to a point 1 foot above the crown of the pipe below any material is deposited by mechanical means. Only the best of the excavated materials shall be used and in no event shall any stone brick or piece of concrete larger than 6" in diameter be used in the backfill. Whenever the trench crosses existing or proposed streets the backfill shall be deposited in 6" layers and tamped for the full depth of the backfill to facilitiate immediate repaving or paving.

Areas having established grass surfaces shall be backfilled to a grade slightly higher than adjacent areas, raked, fertilized and seeded with type of grass of area if disernable.

#### 9. Protection of Work:

All work and material used under this contract shall be protected against damage by the contractor and he shall take whatever precautions necessary to protect the owner and adjacent property from injury, and shall defend any suit arising out of his work where proven degligent or not, paying any judgements award to cover these damages.

#### 10. Sterilization:

All lines shall be flushed through the fire hydrants and "blow-off" corporation cocks in the end of lines, until all distinguishable discolored water disappeared. The main shall then be sterilized with a chlorine solution introduced into the line in a form of chlorine gas under the direct supervision of the City Chemist. The concentration shall be at least 25 ppm of available chlorine and shall stand undisturbed by water withdrawal for a period of 24 hours or as specified by the City Engineer or City Chemist.

#### 11. Clean Up:

The contractor shall keep the site as free of debris as possible and shall remove all waste materials from site each day. At the conclusion of the work he shall make an inspection of the site in the company of the owners representative and the Urility inspector.

All blacktop and concrete removed during the construction shall be replaced as soon as practical, howevereany pavement cut will be kept in good shape untid patched.

#### 12. Superintenance and Inspection:

The contractor will at all times furnish and have present on the job site a competent foreman who will receive instructions from owner or city representative and carry out such instructions within the limits of this contract. He will be responsible for the actions of all subcontractors and his own personnel. He shall hire only competent and skilled workmen and shall remove any member of his firm or have removed any member of a subcontractor who disregards the proper instruction of the owner or city inspector.

The project will be open at all times to the inspector for the Water Utility and all assistance will be given him in his inspection of the works. His time spent on the job will be reimbursed to the Utility at the established rate by the Contractor.

#### 13. Acceptance and Guarantee:

The work contracted for will be deemed to have been completed upon the acceptance by the owner and City of Bloomington. All work and material must be guaranteed against all faults arising from or as a result of the work performed for a period of 1 year following this acceptance by owner and city.

#### 14. Work at Purification Plant:

Extreme caution shall be used in working within the purification plant grounds and heavy equipment should be used only as necessary around the underground reservoirs. The Water Department will make the connection between the 12" main and the hydrant line near the purification plant.

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